

**Expanding Regulatory Pluralism:  
The Role for Information Technology in  
Rulemaking**

Cary Coglianese

Kennedy School of Government / Harvard University  
University of Pennsylvania Law School

This paper is one of a series of works in progress sponsored by the Belfer Center for Science and International Affairs (BCSIA), its Governance Initiative in the Middle East, and the Dubai School of Government. All papers in the series are available on the BCSIA web site, [www.belfercenter.org](http://www.belfercenter.org), and the Dubai School of Government's web site, [www.dsg.ae](http://www.dsg.ae).

# Expanding Regulatory Pluralism: The Role for Information Technology in Rulemaking

Cary Coglianese

Kennedy School of Government / Harvard University

University of Pennsylvania Law School

Whether regulating banks, chemical plants, utility markets, transportation systems, or any other important part of the economy, government requires an extensive amount of timely and accurate information in order to develop effective rules (Coglianese, Zeckhauser, and Parsons 2004). The complexity of governmental regulation not only demands intensive data mining and analysis in order to deal effectively with the technical aspects of rulemaking, but regulatory decision-making also involves making important value choices. For example, in setting air pollution control standards, regulators must at least implicitly decide how much risk society should bear (Coglianese and Marchant 2004). Similar value choices are embedded in other areas of regulation. In regulating telephone or electric utility rates, regulators often must decide what would be a proper rate of return. In establishing standards for drug safety, regulators must make a trade-off between the degree of certainty that new drugs will be safe and the speed with which new drugs can be brought to market.

Admittedly, not every regulation is equally significant. Many regulations address relatively obscure matters of limited scope. But if nothing else, the sheer volume of administrative rules makes them significant. Moreover, many regulatory decisions do hold great consequence in terms of consumer prices, investment security, and public health and safety (Kerwin 2003). Often legislatures are unwilling or unable to make themselves the most significant and difficult public policy trade-offs, so they delegate these decisions to regulatory bodies.

The significant *substance* of regulation therefore makes significant the *process* of how governmental agencies make rules. The design of the rulemaking process can affect the quality, effectiveness, and ultimately the legitimacy of government regulation, for it affects what information decision-makers have to draw upon, what incentives they have to regulate in the broad public interest, and what degree of input can be provided by those who are chiefly burdened by or who chiefly benefit from governmental regulation. For this reason, the design of the rulemaking process itself reflects important policy choices. These choices focus on the procedures and institutional practices through which rules are made, and they are choices that can have positive or negative consequences for the substance and legitimacy of governmental rulemaking.

In this paper, I address one type of choice in regulatory design, namely the use of information technology to connect governmental regulators with those who they regulate and others (including ordinary citizens) who are affected by regulations. I consider the impact of so-called *e-rulemaking* on one important aspect of policy legitimacy, namely its democratic legitimacy. A number of legal scholars have proclaimed that information technology will transform rulemaking from its current state of relative obscurity, even in otherwise supposedly robust democratic states, to one that is fully transparent and truly engages citizens in participation in the regulatory policy process (Noveck 2004; Esty 2004; Johnson 1998). For example, Johnson (1998) predicts that information technology applied to governmental agencies in the United States will “change everything,” eventually “revolutionizing public participation” in the rulemaking process. A number of current e-rulemaking projects underway in the United States and elsewhere specifically aim to make it easy for ordinary citizens to track new governmental rules and to share their comments on these new rules with government officials. For example, a broad e-rulemaking effort by the U.S. federal government has been launched in recognition of the “critically important role citizens play in the rulemaking process”

and with the goal of “improving the public’s ability to find, view, understand, and comment on regulatory actions” (Nelson 2004).

As this goal suggests, the prevailing view of the role of information technology in the rulemaking process appears to be one of enhancing participatory democracy, with many observers marveling at how proposed rules that in the past had garnered only a handful of public comments can now prompt tens, if not hundreds, of thousands of comments thanks to modern email communications. My purpose in this paper is to examine critically claims about whether e-rulemaking can truly advance participatory democracy. As will become clear, my conclusion is that e-rulemaking is not likely to expand citizen participation in rulemaking in any meaningful way and that participatory democracy is the wrong way to conceptualize the potential contributions of e-rulemaking. Instead of thinking that e-rulemaking will “revolutionize” engagement by ordinary citizens in the rulemaking process, we should see e-rulemaking as a way of expanding another notion of legitimacy, specifically what I will call regulatory pluralism. Regulatory pluralism does not aim for broad citizen participation, but instead stresses the importance of participation by those who are the most significantly affected and knowledgeable. Legitimacy in a pluralist sense comes from checking the potential biases that can arise in closed policymaking environments and in providing detailed information and adversarial arguments to help improve the quality of policy decision-making (Dahl 1961). E-rulemaking, I urge, should be viewed as expanding the pluralist domain of rulemaking, making the process open to a larger group of experts and interested organizations, a change that is much more incremental than revolutionary.

To set the stage, this paper begins, in Part I, with an overview of the governmental rulemaking process and current efforts to apply information technology to that process. The rudiments of the rulemaking process will be familiar to readers with a background in U.S. administrative law, but for those without this background, the rudiments are necessary for understanding the evidence and arguments presented later in this paper.

In Part II, I turn specifically to an assessment of claims that information technology will transform the rulemaking process in a significantly more participatory direction. I argue both that information technology will not advance participatory democracy in rulemaking and that, in any case, greater legitimacy of rulemaking does not depend on broad participation by ordinary citizens of the type reflected in comments submitted by email. In Part III, I conclude by suggesting that the failure of e-rulemaking to advance participatory democracy ought not to undercut efforts to innovate in the use of information technology to help with rulemaking. Indeed, e-rulemaking should proceed, but instead by trying to advance the goal of improving pluralist decision-making about rules that are vital to the welfare of society.

## **I. Rulemaking and E-Rulemaking**

The need for governmental regulation stems from failures in free markets. Free markets are valuable structures for allocating scarce resources in ways that will satisfy the greatest amount of welfare (Stokey and Zeckhauser 1978). But to work optimally, markets need to operate under conditions where competition exists, where contracting parties have access to all the relevant information about their transactions, and where all the costs and benefits from any transaction are borne by the contracting parties. Regulation is needed when these conditions do not hold or when there exists concentrations of market power (monopoly) externalities (positive or negative spillovers), or asymmetries of information between contracting parties. In addition, regulation may be justified by other values that are not effectively captured in the market failure framework, such as the protection

of privacy, elimination of discrimination, or the egalitarian distribution of society's resources (OMB 2003).

To address market failures and other values expressed in legislation, each year federal regulatory agencies in the United States like the Food and Drug Administration (FDA), Department of Transportation (DoT), Environmental Protection Agency (EPA), and Equal Employment Opportunity Commission (EEOC), among many others, adopt thousands of rules each year. Although it is difficult to determine the precise costs and benefits of all regulations in the United States, the Office of Management and Budget (OMB) estimated, in a 2001 report to Congress, that health, safety, and environmental regulations may yield from 250 billion USD to 1 trillion USD in benefits each year (OMB 2001). OMB also estimated that these same federal regulations impose annual costs of up to 150 billion USD to 230 billion USD. Other federal regulations, such as those in the areas of transportation, energy, telecommunications, and international trade, may impose additional costs of up to 230 billion USD per year.

When governmental agencies issue rules in these various areas, they almost always follow a procedure called "notice and comment" or "informal" rulemaking, a procedure which is outlined in the Administrative Procedure Act (APA). Under the informal rulemaking procedure, a regulatory agency must simply follow three steps to issue a new regulation:

1. **Notice:** The agency first informs the public of its intentions by publishing a notice of proposed rulemaking (NPRM) in the *Federal Register*, a daily governmental publication that contains regulatory notices and other announcements from the executive branch. In addition to giving the language of the proposed rule, the NPRM will typically provide a discussion of the agency's reasons for proposing a new rule as well as describe any underlying data and analysis. The NPRM may also present alternative options that the agency is considering and invite the public to offer comments on these alternatives.
2. **Comment:** The NPRM will specify a time period for public comment on the proposed rule and will provide an address to where public comments may be sent. If the agency plans to hold public hearings or meetings about the proposed rule and collect oral comments, those meetings will also be announced in the *Federal Register*. Agencies will typically specify a time period when comments should be filed. Although the length of the comment period may vary, agencies frequently allow from one to three months time during which comments may be submitted.
3. **Final Rule:** After reviewing all the comments received, the agency makes any revisions to the proposed rule and publishes its final rule in the *Federal Register*. In the main body of the *Federal Register* announcement — a section referred to as the *preamble* — the agency provides a written justification for the rule in its final form and an explanation of the policy choices that it represents. Although the APA requires only "a concise general statement" of the basis of the rule, preambles for the most significant rules can take up many more pages in the *Federal Register* than the rules themselves, occasionally even taking up a hundred pages or more for a single new rule. In addition to providing the justification for the new rule, the final rule document also indicates the effective date for the rule (i.e., the date when the rule becomes legally binding on regulated entities). Typically, rules will not take effect until a month or more after they have been published in the *Federal Register*.

Although this three-step process forms the basic contour of the rulemaking process across all federal regulatory agencies, there is more to rulemaking than just these three steps (Coglianese 2004). For one thing, the APA procedures only cover a part of the chronology of rulemaking. Much, if not most, of the work of a regulatory agency actually takes place prior to the development of the NPRM. As they develop their proposals, regulators frequently engage in consultations with regulated firms and their representatives, other interested parties, and other executive branch or legislative staff. In some cases, agencies will issue an Advance Notice of Proposed Rulemaking (ANPRM), providing detailed information about a possible NPRM and encouraging the public to provide early comment prior to the issuance of the proposed rule.

Furthermore, the rulemaking process does not necessarily end with the publication of the final rule in the *Federal Register*. The operative text of the rule — without any of the preamble — is subsequently published in the appropriate section of the *Code of Federal Regulations*, an annual governmental publication organizing regulations by topic. In addition, after the final rule is issued, organizations with objections to the rule may file a legal challenge, which may require the agency to defend its rule in court. The APA provides that all agency rules are subject to judicial review and other statutes permit organizations to file lawsuits challenging certain rules even before the agency enforces them. Courts can send rules back to agencies if they find that the rules conflict with statutory authority, violate the U.S. Constitution, arose through improper procedures, or are otherwise “arbitrary and capricious” (the latter being a standard set forth in the APA). In order to settle the lawsuit or respond to an adverse court ruling, agencies sometimes need to revise their rules even after they are published in the *Federal Register*.

In addition, Congress, the president, and the courts have effectively added new steps to the simple notice-and-comment procedures. Some of these additional requirements apply only to the most significant new rules. For example, since 1981, agencies have been required by executive orders issued by the president to conduct economic analysis of “major” or “significant” proposed regulations and to have their analyses reviewed by the Office of Management and Budget (Lazer 2001). These executive order requirements have been effectively codified by the Unfunded Mandates Reform Act, passed by Congress in 1995, which also requires agencies to analyze the costs and benefits of any proposed regulation that would impose annual costs of more than 100 million USD on the economy. As a result, OMB’s Office of Information and Regulatory Affairs plays a key role in reviewing, and sometimes asking for revisions of, significant proposed and final rules before agencies publish them in the *Federal Register*.

Other statutes and executive orders require agencies to conduct other types of analyses. The National Environmental Policy Act, for example, requires agencies to prepare environmental impact statements for any major governmental actions affecting the environment. For certain rules, agencies are required to conduct analyses of impacts on state and local governments, small businesses, and private property rights. Agencies that issue rules requiring businesses or individuals to fill out forms or report information must assess the burdens that their rules impose and observe other standards provided in the Paperwork Reduction Act.

Other rulemaking procedures govern the availability and disclosure of government-held information. For example, the Freedom of Information Act requires that, with some exceptions, all agency information supporting a rulemaking be publicly available. Court decisions and some statutory provisions have resulted in agencies developing “dockets” for each rulemaking proceeding. These dockets contain all the supporting documents associated with each rulemaking, as well as copies of all the public comments filed with the agency and summaries of communications agency staff have with those from outside of government after the NPRM is issued (so-called “*ex parte*” communications). The Federal Advisory Committee Act, Negotiated Rulemaking Act, and Government in the Sunshine Act all impose requirements on certain agency interactions with regulated firms and other members

of the public. The Congressional Review Act requires that agencies report to Congress on their most major rules, giving Congress an opportunity (which it has so far only exercised once) to invoke fast-track legislative procedures to rescind the rule before its effective date.

As this review of procedure suggests, rulemaking involves the collection, processing, and analysis of a large volume of information (Coglianese 2004). In addition to all the technical information that must be acquired and analyzed in rulemaking, rulemaking also involves the exchange of large volumes of language-based information. After all, rules themselves are text, as are public comments and other communications with the various governmental and nongovernmental participants in the rulemaking process. In one form or another, the tasks of gathering, processing, analyzing, and communicating information make up most of the administrative effort associated with rulemaking.

For many governmental agencies, information management can be a significant burden. Early input from interested parties often depends on in-person meetings that can be costly and time-consuming to organize. As a result, these kinds of consultations may not be held as frequently as may be optimal. When members of the public offer written comments on rules, these comments have until recently delivered by hand or mail to *dockets* within the agencies. Agency dockets consist literally of large rooms of file cabinets, sometimes with documents later archived on microfiche also filed in cabinets. These docket rooms have tended to be cumbersome to access by those outside of the agency, especially those living beyond the outskirts of Washington, D.C. At least until recently, agencies' proposed and final rules themselves were relatively inaccessible to the general public, with access limited to hard copies of the *Federal Register* and *Code of Federal Regulations* which were then only available only at certain public or law libraries.

To address the information management challenges inherent in rulemaking, agencies have begun to explore the use of digital technologies in rulemaking. In the early 1990s, the Clinton Administration's National Performance Review issued reports calling upon federal agencies to increase their use of information technology in developing and implementing regulations. In 1994, the Office of the Federal Register made the *Federal Register* available free to the public via the Internet, with the *Code of Federal Regulations* going online shortly thereafter. By the mid-1990s, Congress also began to take action, adopting amendments to the Paperwork Reduction Act and the Freedom of Information Act that aimed to increase the availability of governmental agency information via the Internet.

During this same period, regulatory agencies began to use email to send and edit documents internally when designing new rules. Some agencies developed electronic word processing "templates" to encourage more standardized reporting of information in rulemaking documents. Agencies also began to use the Internet to enhance transparency and public participation in rulemaking. Some began posting key studies and other rulemaking documents on their web sites. Others used information technology to analyze public comments submitted on proposed rules. For example, the Bureau of Land Management used scanning technologies to process public comments on a proposed rangelands rule. Still other agencies began to allow the public to submit comments via email. For example, the Food and Drug Administration used electronic scanning of documents in its 1996 tobacco marketing rulemaking, and email comments played a role in the Federal Aviation Administration's rulemaking on small-scale rockets and the Department of Agriculture's rulemaking on the labeling of organic foods. Other early adopters of electronic commenting included the Nuclear Regulatory Commission and the Federal Communications Commission.

In 1998, the Department of Transportation (DoT) became the first regulatory agency to make available an online, department-wide regulatory docket (dms.dot.gov), providing full access to all studies, comments, and other documents contained in the agency's rulemaking records. The DoT system also allows the public to submit electronic comments on all rules proposed by the department. A few years later, the Environmental Protection Agency (EPA) also adopted an agency-

wide system called EDOCKET. Several other agencies have begun implementing similar docket management systems.

In a major effort to expand information technology capabilities across the federal government, the George W. Bush Administration launched an e-government initiative as part of the President's Management Agenda. The Administration's e-government initiative, which is being coordinated through the Office of Management and Budget and spearheaded by the Environmental Protection Agency, consists of approximately two dozen projects, one of which is e-rulemaking. The eRulemaking Initiative consists of three stages.

The first stage, which was completed in January 2003, involved the creation of a search-and-comment portal located at [www.regulations.gov](http://www.regulations.gov). The *Regulations.Gov* portal relies on the Office of Federal Register's listings of notices of proposed rules and enables users to search all proposed rules that are open for public comment. Building on software originally developed by the Food and Drug Administration, EPA hosts a comment processing system that enables members of the public to comment on any proposed rule issued by any governmental agency, all from a single location on the Internet. Comments submitted electronically at *Regulations.Gov* are then distributed to the relevant agencies.

The second stage of the Bush Administration's e-rulemaking project will expand on the first stage efforts to create a government-wide docket management system. The docket management system will enable the public to access all documents related to every new regulation across the government. A third stage, still under development, will involve the creation of an "electronic desktop" for regulators. This final stage reflects the administration's long-term goal of creating a suite of knowledge management tools to aid with regulatory analysis and decision-making.

The current administration's efforts in e-rulemaking are likely to be continued in future years due to the passage of the E-Government Act in 2002. This law aims to promote the use of information technologies throughout government in order to increase opportunities for public participation, improve governmental decision-making, and enhance the ability of governmental agencies to achieve their programmatic and policy goals. The Act specifically directs regulatory agencies to accept electronically submitted comments and to establish comprehensive electronic dockets for all rulemakings. The Act also creates a new office of Electronic Government within OMB, requires that office to produce guidelines for all agency web sites, and generally calls upon agencies to adopt innovative uses of information technologies.

In one form or another, e-rulemaking is definitely here to stay. A key question for both researchers and policy participants is what difference information technology will make in this domain. As noted at the outset of this paper, many observers are optimistic that e-rulemaking will bring the regulatory process closer to the ordinary citizens who are ultimately affected by governmental regulation and allow them to participate directly in the making of new rules. Having laid the groundwork by outlining the rulemaking process and describing current e-rulemaking efforts, I turn now to the question of whether information technology can in fact live up to the promises of participatory democracy.

## **II. E-Rulemaking and Barriers to Participatory Democracy**

Observers of the rulemaking process have been enthusiastic about the potential for information technology to increase citizen participation because the rulemaking process results in significant policy decisions for society. The rules issued by regulatory agencies are binding law, on par legally with statutes passed by Congress. They affect people's lives as much as, if not sometimes more than,

statutes too. Yet these rules are issued by agency officials who are neither elected by nor otherwise directly accountable to the public (Freedman 1978). Even though the agencies are headed by officials who have been appointed by elected officials, these appointees themselves do not develop all the rules their agencies promulgate, but instead rely on career civil servants for the drafting, analysis, and policy design.

Although the APA in theory gives the public an opportunity to submit comments on new rules, in the past very few ordinary citizens have availed themselves of this opportunity. In one study from the 1990s, less than 6 percent of the comments filed in Environmental Protection Agency rulemakings were submitted by individual citizens (Coglianese 1996). With such historically low rates of citizen involvement in rulemaking, it is not surprising that observers have reacted enthusiastically to the potential for the Internet and email technology to allow for broad citizen participation. As Schlosberg et al. (2005), “the development of new rulemaking technology has embodied a democratic direction.” Developments in information technology, according to Johnson (1998), will ensure that “[c]itizens can ... play a more central role in the development of new agency policies and rules.”

In part, the participatory optimism lurking behind the conventional wisdom has been fueled by a few select instances in which the comments submitted via the Internet by members of the public have reached remarkable levels. A U.S. Department of Agriculture rulemaking on organic foods, for example, garnered more than a quarter of a million comments (Shulman 2003). A Federal Communications Commission rulemaking on the concentration of ownership of media outlets, an EPA rulemaking on mercury emissions, and the Forest Service’s rulemaking proceedings on a ban on roads in wilderness areas similarly elicited hundreds of thousands of comments filed by members of the public.

Do cases such as these portend a new dawn for rulemaking? Do they show that advances in information technology will transform rulemaking into participatory democracy in practice? Looking solely at the number of comments filed in rulemakings such as these, it would certainly appear that the Internet could revolutionize rulemaking, changing it from a sleepy backwater of government to a process that involves a broad segment of the citizenry. Yet despite the large absolute number of comments filed in a few highly controversial rulemakings, there is other evidence and reason to conclude that information technology will not, in the main, transform rulemaking into a broadly democratic, participatory process.

For one thing, those rulemakings that are now generating comments in the hundreds of thousands are only a minute fraction (even a fraction of a fraction) of the several thousand rules issued each year. Moreover, even for the exceedingly rare rule that may generate a half million or even a million comments, this volume still would represent less than 5 percent of the total voting-age population in the United States, which has about 200 million adults and 150 million registered voters (Coglianese 2005). We know that participation by citizens in presidential elections — the most salient avenue for public participation in government — has declined steadily from the 1960s, with only slightly more than half of citizens of voting age participating in presidential elections. If general rates of voting in the United States are lower than in other developed countries, we should certainly be surprised if the mere existence of information technology were to lead to rates of participation in rulemaking at levels of any meaningful consequence.

Information technology may well bring down the costs of finding rulemaking information and submitting comments, but other barriers to citizen participation in rulemaking will remain, including the knowledge such participation requires. In order to participate in rulemaking in a meaningful way, citizens have to know a fair amount about government and about the technical issues underlying any particular rulemaking. After all, if the issues underlying rulemaking were sufficiently technical or difficult that Congress believed it necessary to delegate to an expert agency, then by definition they would be difficult for the ordinary citizen to understand these issues. Even with greater accessibility



to rulemaking information via the Internet, citizens in general will not take the time to learn about the technical issues surrounding rulemaking.

With rulemaking, it may even require reasonably sophisticated knowledge for citizens just to find their way around the dockets that agencies have made available on the Internet. For example, I recently conducted a study to see how easy it would be for a motivated and reasonably sophisticated citizen to access information about a rulemaking. In the fall of 2004, I asked twenty-two graduate students of government to search for specific rulemaking dockets at the U.S. DoT and the U.S. EPA. Subjects were given brief information about four rulemakings and were asked to find a specific numbered document in the docket for each rulemaking. As shown in Table 1, two of the four rules were from DoT, while two were from EPA. Two were open for comment, while in the cases of the other two, the comment period had expired.

Table 1: Rules Included in Online Docket Study

	Agency	Rule	Comment Period	Media Coverage
1	DoT	Federal Motor Carrier Safety Administration proposed rule to replay commercial truck drivers' use of hard copy "log books" with on-board electronic devices to record their hours	Open	Yes
2	DoT	National Highway Traffic Safety Administration proposed standard for event data records for light vehicles	Closed	Yes
3	EPA	Office of Pesticide Programs proposed rule intended to streamline the process for applying pesticide emergency exemptions	Open	Yes
4	EPA	Office of Air and Radiation proposed rule that would add monitoring and reporting requirements for states choosing to participate in a model cap-and-trade program for mercury emissions from power plants	Closed	Yes

These four rules were selected because they had each been proposed within the previous year, and they each had received coverage in the media. DoT and EPA were selected because both of these agencies have installed online dockets that make available comprehensive information and all public comments on their rulemakings.

The study was designed to simulate the experience of a typical user who, upon learning of a proposed rule via the media, decided to search online for more information about the rule from the agency's online docket. According to the findings of another study that surveyed those filing comments in three environmental rulemakings, half of the time people filing comments report relying on agency web sites in developing their comments (Schlosberg et al. 2005). It is not clear from Schlosberg et al.

(2005) what the exact proportion of ordinary citizens who search agency web sites before filing comments. But whatever the precise proportion, testing the ease with which users can find information on the Internet is relevant in assessing whether e-rulemaking truly will “mak[e] it easier for citizens to participate in the regulatory process” (Daniels 2002).

Subjects in the docket study were given a brief description of the proposed rules that included keywords used by the agency to describe each rule. They were also given the applicable agency’s name. They were instructed to find the agency’s docket for the rule and, to ensure that they had found the correct docket, they were also asked to find and record a specific document within the docket. The documents in each docket are numbered sequentially, so subjects were asked simply to find the “fourteenth [or other number] document listed in the agency’s docket for this rulemaking.”

Subjects were also instructed to record the time they spent on their searches and to record their results. Since the typical Internet user has neither limitless time nor an unbounded attention span, subjects were instructed to limit their searches to ten minutes per rulemaking. Once they had found the request document or at the end of ten minutes of searching (whichever came first), they were either to give the title of the requested document or describe briefly the searching they had done.

In an effort to assess the impact of the federal government’s *Regulations.Gov* web portal, half of the respondents were instructed to begin their searches for each rule at *Regulations.Gov* (though they could then leave to go to the agency’s web site), while the other half were instructed to begin their searches at the agency’s web site (and not to go outside the agency’s website). Subjects were randomly assigned to these two groups. Although the overall size of each group was relatively small (n=11), the two groups were comparable along quite a number of different dimensions as shown in Table 2.

Table 2: Subject Characteristics in Two Groups

	No. of Internet Uses	Years Internet Use	General Internet Expertise (scale 1 -5)	Info Search Expertise (scale 1 -5)	US Government Expertise (scale 1 -5)	English as Native Language
Agency Website	4.7	8.5	3.9	3.6	2.5	73%
Regulations .Gov	3.8	7.6	3.9	3.7	2.5	55%

Subjects were asked to report how many distinct functions and services that they used the Internet for, their years of Internet usage, their self-reported expertise with using and searching the Internet, and their self-reported knowledge of the operations of the U.S. government. As Table 2 shows, the two groups were virtually indistinguishable in terms of their self-assessment of their Internet and U.S. governmental expertise. The group assigned to start at the agency web site reported a slightly greater number and years of Internet usage.

The graduate students who participated in the study attended a school that attracts a large number of students from outside of the United States, so not every subject in the study was a native speaker of English. They all met the strict admissions standards to an elite graduate program, however, so the English reading skills of even the non-native speakers was strong, indeed probably stronger than the average citizen born and raised in the United States. The groups did vary somewhat in terms of the proportion of subjects who were native speakers, with the agency web site group having a larger number of subjects with English as their native language.

Overall, the two groups are quite comparable. As between the two groups, though, the group assigned to begin at the agency web sites probably exhibited a somewhat greater propensity to do

better, given its slightly greater experience with the Internet and with native use of the English language. The results from the study should therefore be interpreted with a bias, if any, slightly in favor of the agency web site group.

The overall results showed that the subjects had a difficult time identifying the correct docket within the specified time. The overall average number of correct dockets identified by each subject was 1.9, or only half of the dockets they were instructed to find. Table 3 shows the distribution of correct docket identification. Only 26 percent of the subjects were able to correctly identify at least three of the four dockets.

Table 3: Percent of Subjects Identifying Dockets Correctly

0 correct dockets	13%
1 correct dockets	13%
2 correct dockets	48%
3 correct dockets	22%
4 correct dockets	4%

There was a noticeable difference between the two groups in their identification of dockets. The group instructed to begin at the agency web site only identified on average 1.7 of the four dockets, while the group that started at *Regulations.Gov* identified an average of 2.3 correct dockets. Other differences are shown in Tables 4 and 5, which show respectively that (a) subjects found somewhat more correct dockets for DoT rules than for EPA rules, and (b) subjects found dockets open for comment much more easily than dockets that were no longer open.

Table 4: Accessibility by Agency

	DoT	EPA	Total
Agency	55%	32%	43%
Reg.Gov	59%	55%	57%
Total	57%	43%	50%

Table 5: Accessibility by Open/Closed

	Open for Comment		Closed for Comment	
	FMCSA	OPP	NHTSA	OAR
Agency	64%	64%	45%	0%
Reg.Gov	82%	82%	36%	27%
Total	70%	70%	39%	13%

Overall, these results show that even at agencies with online docket systems, the theoretical *availability* of rulemaking information does not mean that citizens will actually be able to *retrieve* that information. Half of the time subjects could not find the dockets they were directed to find, at least not in the time they were given to search for them.

That said, perhaps it should be reassuring that rules that were open for comment were substantially easier for subjects to find than rules that were no longer open for comment. More notably, the existence of *Regulations.Gov*, a government-wide portal for all rules that are open for public comment, does appear to make it easier for the public to locate docket information. Despite the potential bias in favor of the agency web site group (given its longer Internet experience and higher proportion of native English speakers), users who started at the agency web sites did not fare as well as users who started at *Regulations.Gov*. The *Regulations.Gov* group exhibited 82 percent retrieval rates for open rules, compared with 64 percent for the same rules when searches started at the agency web site.

It should be noted that among those subjects who did find a correct web site, it generally took them about a minute longer on average to do so from *Regulations.Gov* than via the agency web site. In all likelihood, this is because *Regulations.Gov* introduces an extra step in the search process, with subjects needing to search *Regulations.Gov* before transferring over to the agency web site to find the docket. *Regulations.Gov* does not link directly to the agency dockets; it just contains the NPRM which itself lists the docket number that users can use to find the docket at the agency web site.

Despite the differences between open and closed rules, and between starting searching from *Regulations.Gov* and agency web sites, it remains that substantial proportions of this group of educated and savvy Internet users could not easily find regulatory dockets. Why were these subjects — who were, after all, better educated than the average citizen — not able to find more regulatory dockets, even when they were given a clear description of the rule and the precise name of the agency that proposed the rule? At a de-briefing session, subjects reported a number of challenges that they had experienced when searching for regulatory dockets. First, they encountered multiple rules on the same subject and were unable to distinguish between them. For example, the EPA is addressing the problem of mercury pollution through a variety of rules, whether rules addressing air, water, or waste. As a result, users who searched for the specified mercury rule by typing the word “mercury” in the title field in EPA’s EDOCKET retrieved seventeen different dockets and faced great difficulty in deciphering which one was the air rule that they were interested in.

Second, sometimes agencies had multiple dockets addressing exactly the same subject matter. Agencies sometimes will open a docket in connection with an early investigation of a subject of a potential new rulemaking, and then will open up another docket later when they are filing an NPRM. As it happened, NHTSA’s event data recorders rule had two dockets assigned to it in DoT’s docket management system, even though only one was listed in the agency’s NPRM filed in the *Federal Register*.

Finally, even when subjects were able to find agency web sites with information about particular rulemakings, these web sites did not provide any direct link to the corresponding rulemaking dockets. For example, to find the mercury emissions docket from EPA’s home page, the user needed to click through four levels of the agency’s web site and open a portable document format (.pdf) file containing the NPRM before finding the docket number from within the NPRM. At that point, the user then needed to back to the EPA’s homepage to link to the agency’s EDOCKET and then search for the docket number within the EDOCKET system.

Clearly, users who are not already sophisticated and knowledgeable about particular rulemakings will continue to face barriers in gathering information about those rulemaking, even after the introduction of online dockets. Some technologies may be better than others, as the keyword

searching capabilities in *Regulations.Gov* worked better than the search engines on agency web sites. Nevertheless, the theoretical accessibility of regulatory information on the Internet does not necessarily mean that this will prompt a greater number of citizens to use that information, any more than the ability to order auto parts online will turn many more ordinary automobile owners into do-it-yourself mechanics.

### III. Technology and Regulatory Pluralism

The docket study suggests how cognitive and knowledge-based barriers to participation in rulemaking can persist even in the face of applications of information technology to the rulemaking process. This is also evident in the nature and quality of the comments submitted by ordinary citizens following the introduction of electronic comment filing. When agencies have received tens of thousands of comments (or more) on particularly salient rulemakings, the vast bulk of these comments have been either short (often just a few lines) or formulaic. Increasingly, electronic form letters are being directed to agencies not directly from citizens themselves, but indirectly via the web sites of advocacy groups that contain buttons urging visitors to send messages to Washington. According to a recent study of rulemaking comments, “[m]ass-mailed form comments originating from various environmental and other interest groups make up the vast majority of comments submitted on rules” (Schlosberg et al. 2005). That same study reported that out of 500,000 comments submitted on a recent controversial EPA rule, only about 4,000 were deemed by the agency to be original. Clearly, more participation does not mean more meaningful participation. It even may not make much sense to treat the clicking of a button on an interest group web site as participation in rulemaking at all.

Admittedly, such electronic form letters do provide agencies with some indication of citizen preferences. Perhaps, then, this is the redeeming value of electronic technology, in that it will allow more people to express their preferences and make it easier for agencies to aggregate these preferences. Yet if that is the goal, even 500,000 or a million comments reflect the views of only a small fraction of the entire public, and there is no reason to think that such a fraction is representative of the public as a whole (the latter being what the agency presumably seeks to serve). If agencies were interested in incorporating public preferences into their regulatory decisions, they would be better off commissioning public opinion surveys that asked questions of a randomly sample of even just one or two thousand citizens. A few thousand survey responses would be, if randomly generated, more accurate and credible measures of the overall views of the public than tens or hundreds of thousands of self-initiated comments. In short, agencies do not need to create online dockets or regulatory portals or use any information technology beyond the telephone to get a good understanding of what the public prefers.

If efforts to use information technology to make it easier for more citizens to participate lead only to superficial participation of a select, unrepresentative portion of the public, and if similar efforts to improve the *accessibility* of rulemaking information through information technology do not necessarily result in increases in either *usability* or actual *use* of this information by many ordinary citizens, is the e-rulemaking project destined to fail? It is likely to fail only if we think that the goal of e-rulemaking is to advance participatory democracy. This is because the barriers to participatory democracy are much greater than the barriers that information technology can overcome. As long as most citizens lack more than the most rudimentary knowledge of how government works and about the technical issues underlying most rulemakings, e-rulemaking is simply not going to make any but perhaps the most trivial improvements in the extent and quality of ordinary citizens’ engagement with regulatory policymaking.

Notwithstanding the prevailing view that e-rulemaking should revolutionize rulemaking and foster a transformation to a broadly participatory process, e-rulemaking can be conceived in terms other than participatory democracy. Indeed, it should be, as the insurmountable barriers to broad citizen participation in rulemaking mean that very few, if any, such proceedings will exhibit any robust indicia of participatory democracy in our lifetime. A much more realistic goal for e-rulemaking would be to enhance *regulatory pluralism*.

By regulatory pluralism, I mean to refer to a rulemaking process that involves a subset of the broad public with a high level of interest in and knowledge about a particular rulemaking. In this sense, pluralism seeks more participation by members of the public than does insulated or secretive decision-making by a few unelected regulatory officials, but it demands less participation than does participatory democracy. The participation that counts in regulatory pluralism is participation by organized interests and experts from outside of government. If we can imagine a spectrum of participation running from no participation to robust participatory democracy, regulatory pluralism would fall somewhere in between the two ends of this spectrum.

In one of the most widely recognized articles in administrative law, Professor Richard Stewart argued that pluralism explained a variety of procedural features of U.S. rulemaking. He defined pluralism as a “fair representation of a wide range of affected interests in the process of administration decision” (Stewart 1975). Pluralism explained not only the notice and comment process, but also the imposition of open meeting requirements and freedom of information laws that enable affected interests to know about governmental actions. It also explained a variety of judicial reforms, such as the expansion of standing, which allowed groups organized around regulatory benefits to seek redress in the courts. Once in court, interest groups could take advantage of a reinvigorated “arbitrary and capricious” standard under which the courts would take a “hard look” at agencies’ regulatory actions.

Even though pluralism explains well these developments in administrative law, Stewart ultimately criticized efforts to promote pluralism in the regulatory process. He did so on the basis of the kind of universalistic concerns that motivate participatory democracy. Specifically, Stewart believed that procedures based on pluralism would fail to result in the representation of all interests in society. In this respect, Stewart followed political scientists who have criticized pluralism because they believed it sanctified a biased system of interest representation, rather than a full representation of all of society’s interests (Schattschneider 1960).

Stewart and other critics are certainly correct to observe that not all interests are represented fully or equally in a pluralist process. As I have already suggested in discussing participatory democracy, there are steep barriers that prevent everyone who may be affected by a proposed rule from participating in the regulatory process. Corporations and trade associations are much more extensively involved in all phases of rulemaking than ordinary citizens have ever been (or will ever be), owing to their greater resources and ability to monitor governmental actions, contribute technical information, and offer sophisticated substantive comments. Business organizations also outnumber and outspend the likes of environmental groups and other so-called citizen advocacy organizations. This does not mean that business interests always prevail in the pluralist process; indeed, far from it. However, Schattschneider was certainly correct to note that certain sections of the interest group “choir” sing louder than others do.

These criticisms of pluralism, while in valid in a certain sense, nevertheless do not undermine pluralism (Shapiro 2005). Dahl and other pluralists from the 1950s did not ever hold pluralism to be a Platonic ideal, but instead they viewed pluralism pragmatically, as a better alternative than other forms of policymaking. If we view pluralism as simply a policy goal that is better than alternatives of, say, regulatory capture or captivity, then we can see that pluralism has several virtues.

First of all, pluralism protects against the biased decision-making that can occur in the absence of any accountability through reasons or the beneficial effects of airing dissenting views (Sunstein 2003).

When multiple affected interests can participate in rulemaking, the regulator benefits from the competition in ideas made possible by the pluralist environment (Lazer 2001).

Second, an open process allows for varied interests to gather and collect different kinds of information. While each bit of information transmitted by an interest group can be expected to be self-serving from the standpoint of that interest, regulators will still be better informed in the aggregate. The possibility that information may be submitted by people who approach a regulatory problem at a different scale or level of involvement would be helpful too (Pike et al. 2005). The local sanitation engineer for the City of Milwaukee, for instance, may well have useful insights about how new EPA drinking water standards should be implemented, insights that might not be apparent to the American Waterworks Association representatives in Washington, D.C.

Finally, pluralism does give regulators some information about who stands to gain and who stands to lose from different policy alternatives. Pluralism does not demand that regulators abandon their commitment to serving the entire public, which is why business does not always (or even often) prevail when it comes to governmental regulation. Public interested regulators can and should understand that the pluralist process still has its own biases, even if it is better than having unelected regulators going off on their own to set regulatory policy without consulting with the most affected and knowledgeable parties.

What are the implications of pluralism for e-rulemaking? Unlike participatory democracy, pluralism offers a viable and meaningful goal for e-rulemaking. E-rulemaking can be viewed as a strategy for expanding regulatory pluralism. In contrast with claims that information technology will “transform” or “revolutionize” rulemaking to allow citizens to participate, it is realistic and helpful to urge the use of information technology to allow a *broader* (albeit still not complete) set of well-organized and sophisticated actors to mobilize, monitor what agencies are doing, and share potentially valuable information and insights with government decision-makers.

For any given regulatory action, there may only be a relatively limited number of organizations and actors that are both affected by and significantly knowledgeable about the issues regulators confront when crafting a rule. Yet it is far from clear that all of these organizations and actors currently know about or comment on all the rules that they should. E-rulemaking can help lower the cost of participation to those members who have something valuable to contribute. In this way, information technology holds out the possibility that affected organizations may be able to participate in a larger number of rulemakings (because the costs-per-rule of expert participation are lowered by easier access to relevant docket information). E-rulemaking also holds out the possibility that many more such knowledgeable organizations and actors would be able to participate. For many smaller organizations, as well as individual engineers, economists, scientists, and other experts, the barriers to their participation have been precisely the barriers that information technology can overcome, namely barriers like the need in the past to be located in Washington, D.C. or to have the ability to hire messengers to retrieve documents.

It is possible that the knowledge-based barriers that remain after the creation of online dockets and the like could actually serve as helpful screening devices for regulators. Those who are able to clear the remaining barriers and submit a significant comment (as opposed to a form letter) are more likely to know something potentially helpful. In the past, when the barriers for knowledgeable participation were higher, the practical exigencies of the rulemaking process filtered out voices of the chorus for largely irrelevant considerations. We may speculate that e-rulemaking — though it cannot eliminate the barriers to broad citizen participation — can nevertheless recalibrate pluralism so that fewer organized interests and knowledgeable experts are excluded from the process simply because they did not know that a rulemaking was taking place or could not gather information about a proposed rule in time to offer comments on it.

In evaluating the contributions of information technology to regulatory policymaking, then, observers of the regulatory process should pay heed to whether efforts such as *Regulations.Gov* or

online dockets result in any increase in the number of helpful comments. Even a slightly more diverse array of arguments and information from knowledgeable actors would be a more meaningful measure of the success of e-rulemaking than the generation of a million email form letters submitted by ordinary citizens. If the expansion of regulatory pluralism turns out to be essentially what e-rulemaking accomplishes, it will be an accomplishment that even ordinary citizens ought to applaud.

## **Conclusion**

Governmental regulation affects virtually every vital aspect of the economy, so the process by which governmental officials make regulatory decisions is a vital area for academic study and policy development. E-rulemaking, or the application of information technology to the regulatory process, is one such potential process improvement. Information technology is said to have the potential for making it easier for citizens to engage with governmental regulators.

Although both scholars and public officials have characterized e-rulemaking's potential contributions to participatory democracy in revolutionary terms, the reality is that there are barriers to ordinary citizen engagement in rulemaking that even information technology will be unable to surmount. Most citizens are disengaged from politics and public policy in general, and no amount of computer programs or technological innovation is likely to change that. Rather than getting members of the public to participate in the seemingly arcane or technical discussions surrounding regulatory policymaking, new technology is most likely to be used by citizens when they make their lives easier, facilitate improved communications with friends and family, or provide entertainment.

As illustrated by the data from the user study of online dockets, significant knowledge-based barriers will continue to inhibit broad and meaningful citizen participation in rulemaking. If many members of a relatively educated group cannot easily find the regulatory dockets for rules that were covered in the press, we should expect that ordinary citizens will face similar if not greater difficulties, especially for the rules that never receive media coverage.

Even if the hope of information technology transforming rulemaking into a participatory democracy is unrealistic, this does not mean that e-rulemaking is unimportant or misguided. Rather, participatory democracy is simply the wrong goal for e-rulemaking efforts. These efforts should be conceived as means for expanding the pluralist process. Regulatory pluralism does not demand or even seek widespread citizen participation, but instead favors involvement by those who are the most significantly affected by and knowledgeable about rulemaking. E-rulemaking can and should be viewed as expanding the pluralist domain of rulemaking, making the process open to a larger group of experts and interested organizations. If it accomplishes this goal, e-rulemaking will have made incremental rather than revolutionary change, but change that nevertheless can still be viewed as worthwhile.



## References

- Coglianese, Cary. 2005 The Internet and Citizen Participation in Rulemaking. *I/S: J. L. & Pol. Info. Soc.* 1: 33–57.
- Coglianese, Cary. 2004. E-Rulemaking: Information Technology and the Regulatory Process. *Admin. L. Rev.* 56: 353–402.
- Coglianese, Cary and Gary Marchant. 2004. Shifting Sands: The Limits of Science in Setting Risk Standards. *Univ. Penn. L. Rev.* 152: 1255–1360.
- Coglianese, Cary, Richard Zeckhauser, and Edward Parson. 2004. Seeking Truth for Power: Informational Strategy and Regulatory Policy Making. *Minn. L. Rev.* 89: 277–341.
- Coglianese, Cary. 1996. Litigating Within Relationships: Disputes and Disturbance in the Regulatory Process. *Law & Society Review* 30: 735–765.
- Dahl, Robert. 1961. *Who Governs? Democracy and Power in an American City.*
- Daniels, Mitchell E. 3 May 2002. Memorandum on Redundant Information Systems Relating to On-Line Rulemaking Initiative, *available at* [http://www.ksg.harvard.edu/cbg/Conferences/rpp\\_rulemaking/OMB\\_Opens\\_Reg\\_Process.pdf](http://www.ksg.harvard.edu/cbg/Conferences/rpp_rulemaking/OMB_Opens_Reg_Process.pdf)
- Esty, Daniel C. 2004. Environmental Protection in the Information Age. *N.Y.U. L. Rev.* 79:115.
- Freedman, James O. 1978. *Crisis and Legitimacy: The Administrative Process & American Government.*
- Johnson, Stephen, 1998. The Internet Changes Everything: Revolutionizing Public Participation and Access to Government Information through the Internet, *Admin. L. Rev.* 50:277.
- Kerwin, Cornelius. 2003, 3d ed. *Rulemaking: How Government Agencies Write Law and Make Policy*, 189.
- Nelson, Kimberly. 24 March 2004. EPA Chief Information Officer Statement before the House Committee on Government Reform.
- Noveck, Beth. 2004. The Electronic Revolution in Rulemaking. *Emory L. Rev.* 53:1.
- Office of Management and Budget (OMB). 2003. Circular A-4 on Regulatory Analysis, *available at* <http://www.whitehouse.gov/omb/circulars/a004/a-4.pdf>
- OMB. 2001. “Making Sense of Regulation: 2001 Report to Congress on the Costs and Benefits of Regulations and Unfunded Mandates on State, Local and Tribal Entities,” *available at* <http://www.whitehouse.gov/omb/inforg/costbenefitreport.pdf>
- Pike, William, Brent Yarnal, Alan M. MacEachren, Mark Gahegan, and Chaoqing Yu. 2005. Retooling Collaboration: A Vision for Environmental Change Research. *Env't.* 47: 8.
- Schattschneider, E.E. 1960. *The Semi-Sovereign People.*

Schlosberg, David, Stephen Zavestocki, and Stuart Shulman. 2005. 'To Submit a form or Not to Submit a Form, That is the (Real) Question': Deliberation and Mass Participation in U.S. Regulatory Rulemaking, paper presented at the annual meeting of the Western Political Science Association.

Shapiro, Sidney. 2005. Pragmatic Administrative Law, Issues in *L. Scholarship*, available at <http://www.bepress.com/cgi/viewcontent.cgi?article=1057&context=ils>

Shulman, Stuart W. 2003. An Experiment in Digital Government at the United States National Organics Program. *Agri. & Hum. Val.* 20:253.

Stewart, Richard B. 1975. The Reformation of American Administrative Law. *Harr. L. Rev.* 88:1667.

Stokey, Edith and Richard Zeckhauser. 1978. *A Primer for Policy Analysis*.

Sunstein, Cass R. 2003. *Why Societies Need Dissent*.