RegulationRoom: Field-Testing An Online Public Participation Platform During USA Agency Rulemakings

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Abstract: Rulemaking is one of the U.S. government's most important policymaking methods. Although broad transparency and participation rights are part of its legal structure, significant barriers prevent effective engagement by many groups of interested citizens. RegulationRoom, an experimental open-government partnership between academic researchers and government agencies, is a socio-technical participation system that uses multiple methods to alert and effectively engage new voices in rulemaking. Initial results give cause for optimism but also caution that successful use of new technologies to increase participation in complex government policy decisions is more difficult and resource-intensive than many proponents expect.

Keywords: e-rulemaking, online participation, public participation, e-government, open government

1. Introduction

On his first day in office, USA President Barack Obama issued an Open Government Memorandum to the heads of federal agencies. It directed them to use Web 2.0 and other information and communications technologies (ICTs) to increase transparency, public participation and collaboration in their decisionmaking. By the end of Obama's first year in office, the White House had held a national, online Open Government Initiative involving more than 20,000 unique visitors that comprised brainstorming, discussion, and collaborative drafting phases. It had also issued an Open Government Directive that told agencies to make government datasets available online and to expand the provision of government e-services. The Directive also emphasized using Web 2.0 ICTs to expand public involvement in federal decision making. Agencies were given four months to create "open government plans," and six months to identify at least one open government "flagship initiative" project.

Here we present early experience from RegulationRoom, (http://regulationroom.org/), an experimental online public participation platform, which is the U.S. Department of Transportation's (USDOT) flagship initiative project. To date, the most prominent Obama Administration Web 2.0 participation projects have used ICTs such as Ideascale, Facebook, Twitter, and YouTube to engage citizens in brainstorming and posing questions to government officials. The RegulationRoom project is unusual in being a systematic effort to discover how to use ICTs to alert and engage citizens effectively in the formation of complex government policy. We focus on rulemaking, the process federal agencies use to make new health, safety, environmental, and other regulations.

Rulemaking has seemed an obvious target for e-government efforts for two reasons. First, it has become one of the most important methods for making public policy in the U.S. (Kerwin 2003) Second, transparency and participation rights are already part of its formal legal structure. (Strauss et al, 2011) The originating agency for a rulemaking is required to give public notice of what it is proposing, to reveal the scientific studies or other data it is using, and to explain its legal and policy rationales. Then, it must provide a period of time (typically 60–90 days) during which any person has the right to comment on any part of the proposal. The agency then must read all comments and

consider them. To confirm that it has done so, it must publish a written explanation that responds to criticisms, questions, and suggestions made in the comments. (Lubbers 2006) Although the right to comment is universal, the process has been dominated by large corporations, trade and professional associations, and similar legally sophisticated and well-resourced entities. (Kerwin 2003)

Since the mid-1990s, individual agencies like USDOT and the federal government as a whole have tried to broaden rulemaking participation by using the Internet. These first generation "e-rulemaking" systems essentially put the conventional process online: citizens are able to go a website, view the "Notice of Proposed Rulemaking" and other key rulemaking documents, and submit a comment either by typing into a comment box or by attaching a document file. Unfortunately, researchers agree that first generation e-rulemaking systems have not produced significantly broader, meaningful public participation. (Report 2008; Balla and Daniels 2007; Coglianese 2006)

RegulationRoom is a second-generation e-rulemaking system that uses Web 2.0 ICTs and human facilitative moderation to support effective rulemaking participation. The project is a unique collaboration between academic researchers of the Cornell eRulemaking Initiative (CeRI) and the government. CeRI owns, designs, operates, and controls RegulationRoom, but also works closely with USDOT to identify suitable "live" rulemakings for the site. (Farina, et al., 2011a) Agency officials work with CeRI before the public comment period opens, and help evaluate success after it closes. This collaboration allows us to field test design and operational strategies for eliciting and supporting participation by individuals who have not previously commented in a federal rulemaking. CeRI involves researchers from communications, computing, conflict resolution, information science, law, legal informatics, and political science. This type of interdisciplinary approach has been recognized as important to designing successful online participation systems. (Preece 2000; Report 2008)

After outlining the goals and main features of RegulationRoom, this paper briefly describes experience with the first three rulemakings offered on the site.

2. RegulationRoom: using multiple methods to lower participation barriers

After examining the unsuccessful history of conventional rulemaking and first-generation e-rulemaking systems, we hypothesized that a public participation system must address three barriers to citizen engagement.

- Unawareness: Many regulations have direct impact on individuals, small businesses, local and state government entities, and non-governmental organizations. Unfortunately, Notices of Proposed Rulemakings (NPRMs) rarely reach these kinds of stakeholders. The Federal Register (the official location for such agency announcements) is available online at federalregister.gov, but most individuals and groups do not know that it exists. Increasingly, important rulemakings are noted on industry, news, and political blogs, but rarely do these sources either explain that everyone has a legal right to submit comments or link to the official government commenting portal, regulations.gov.
- Information Overload: By law, agencies must justify their proposals on legal, scientific, economic, and policy grounds. Therefore, rulemaking is extraordinarily information-intensive. The documents are long and complex. For example, the NPRMs of rules offered on RegulationRoom contain 13,000–27,000 words and are written at a graduate-school reading level. In addition, NPRMs are accompanied by one or more lengthy reports that assess the nature and extent of predicted social benefits and costs. Such materials place enormous attentional and cognitive demands on would-be participants. Yet, as explained next, they *must* understand at least some part of this information in order to comment effectively.
- Process Ignorance: Despite rulemaking's importance, few U.S. citizens – even those well educated and politically attuned – know about it or understand how it works. Because agencies

work under rigorous legal requirements of data collection and review, deliberative consideration of criticisms and alternatives, and assessment of costs and benefits, rulemaking is a process of "technocratic rationality." (Farina et al. 2011b) For most U.S. citizens, however, participation in government decisionmaking means casting a vote – formally in elections and referenda, or informally in opinion polls and surveys. Thus, when inexperienced participants *do* comment they do not make the sort of informed, reasoned statements that have weight in the agency's decision. Rather, they treat rulemaking as a plebiscite, sometimes making hundreds of thousands of "comments" that are virtually worthless expressions of general support or opposition. (Shulman 2006)

To address these barriers, RegulationRoom uses a combination of social and conventional media, purposeful site design, design of informational content, and human facilitative moderation.

2.1 Remediating unawareness

USDOT conducts several hundred rulemakings annually, most of which affect only limited industry groups who already participate effectively. Rulemakings done on RegulationRoom are carefully selected because they directly affect individuals or groups unlikely to meaningfully engage in the conventional process. Of the three rulemakings discussed here, two involved commercial motor vehicle operators (CMVOs); about 99% of these companies are small businesses. The "texting rule" proposed to ban texting while driving for CMVOs (USDOT 2010a); the "EOBR rule" proposed to require CMVOs to purchase and use "electronic onboard recorders" to verify compliance with maximum driving time limits. (USDOT 2011a) A third rulemaking, the "APR rule," proposed new airline passenger rights in areas including tarmac delay, flight delays and rebooking, fare advertisement, and baggage fees. (USDOT 2010b) (As this paper was written, we were concluding a fourth rulemaking that would require that air travel websites and airport check-in kiosks be accessible to travelers with disabilities (USDOT 2011b))

Once a rule is chosen, the process of remediating public unawareness begins long before the comment period opens. First, we create a communications outreach plan: After defining the kinds of stakeholders we want to alert, we try to discover where, and how, these target groups get information. We identify membership associations, recreational and trade publications, and influential individuals such as bloggers, and reach out to them through email, phone, and online communications. We develop a list of keywords and phrases to use (1) *proactively* in daily tweeting and Facebook posting and, most recently, in Facebook and Google ads; and (2) *reactively* by setting up continuous automated searches and responding with comments or tweets when the rule or its subjects appears in news sites, blogs or Twitter. RegulationRoom has a presence on Facebook, and the site itself is designed to encourage users to "share" both issue posts and individual comments. We coordinate media outreach with USDOT's communications office, and try to persuade conventional and online media to publicize the rulemaking and the availability of RegulationRoom. We have found that print coverage can be surprisingly effective in driving online participation. (Farina et al. 2011b)

Registered users receive a welcome email, as well as a notice whenever someone replies to their comments. We email them periodically *during* the comment period to provide updates and encourage further participation, and *after* the comment period closes to report on how the rulemaking concluded – an important step often omitted in public participation projects. (Johnson 2009)

In sum, the outreach challenge is winning what Lupia calls "the Battle for Attention." (Lupia 2002) The communications objective is not simply alerting the targeted groups to the rulemaking, but also motivating them (1) to focus on this (rather than all the other stimuli in their environment); and (2) to take action to participate (rather than doing all the other personal and professional tasks they might

be doing). In general, the most effective strategy is to explain how adopting/rejecting the proposed rule will significantly benefit/harm them. (Lupia and McCubbins 1998)

2.2 Managing information overload

The other, equally challenging, "cognitive victory" required for effective participation (Lupia 2002) is presenting the vast information of a rulemaking so that people without legal or technical sophistication can use it. As Lupia observes: "the key is not simply putting people in a place where others speak. It is putting them in situations where they want to pay attention to information that will help them acquire the kinds of competence that motivated the deliberative enterprise in the first place." (Lupia 2009)

We wanted to offer "targeted" commenting – the ability for users to attach comments to specific segments of the proposal. E-rulemaking proponents long advocated such functionality to encourage more focused and specific comments, rather than the vague, global expressions of support or opposition often submitted by newcomers. We also recognized the crowdsourcing potential of targeted commenting: users themselves would organize comments by content. We found this functionality in Digress.It, available as a plug-in for the WordPress content management and blog publishing application on which RegulationRoom is built.

However, because of both length and readability level, having users comment directly on the NPRM text was infeasible. Our solution utilizes several information design strategies:

- Triage: identifying and fore-grounding the information users will most likely be interested in and need, and packaging this information in thematic segments (6–10 "issue posts") of manageable length;
- Translation: using relatively simple vocabulary and sentence structure;
- "Layering:" heavily using hyperlinks to allow users, at their choice, to go deeper (e.g., to relevant sections of primary documents; to statutory text or background information) or to find help (e.g., glossary and brief explanation tooltips). Through layering, *all* information in the NPRM and supporting documents is available on the site, but in a form that gives users control and is less likely to overwhelm; and
- Indexing: all the issue post topics are visible and accessible from a navigational index; *within* each post, every commentable section has a title, all of which are visible and accessible from an index at the top of the post. (The latter was a simple but effective solution to the problem we observed in early rules that users tended to attach comments to the first section, regardless of content.)

The other essential component of managing information overload for inexperienced commenters is human facilitative moderation. The moderator interventions (described next) include: (1) recognizing when users are missing, or misunderstanding, important information and helping them acquire it; (2) encouraging more knowledgeable or engaged users to go more deeply into the agency's analysis; and (3) pointing out other issues, and other comments, that are related to the commenter's apparent interests or concerns. Although we continue to refine our information design strategies with every rule, we doubt it is possible for inexperienced commenters to manage the information demands of effective participation without assistance. In some settings, other commenters provide this (Cosley et al. 2005), and this peer-assistance can contribute to online community-building (Farzan et al. 2009). Our experience suggests, however, that peer mentoring is less likely to occur when most users are relatively unknowledgeable, and when participation is perceived as episodic (rule-specific) rather than as engagement with an ongoing community.

2.3 Remediating ignorance of the process

Educational materials on the site include "Learn More" pages that use graphics and simple language to explain the rulemaking process and effective commenting. Users can also watch a short video explaining rulemaking. However, consistent with general website use patterns, these educational aids are used only sporadically. (Farina et al. 2011b) The principal strategy for increasing rulemaking "participation literacy" is tacit rather than overt: human moderators who mentor effective commenting using facilitative moderation. Law students in an e-government clinic are trained in the conflict resolution techniques of content- and process-based group facilitation (Kaner 2007), and they moderate asynchronously under the supervision of senior researchers.

A detailed Moderator Protocol identifies eight different roles, with a total of twenty-one types of interventions a moderator might make. (See Table 1) Along with roles that advance general online-community building (e.g., Social functions; Stimulate discussion), moderators help users manage the large informational load of rulemaking (e.g., Substance education) and covertly educate them in what effective participation requires (e.g., Mentor effective commenting; Stimulate discussion).

Table 1: Moderator Protocol

Moderator Roles:	Interventions:
Social functions	Welcoming Encouragement; appreciation of comment Thanks for participating
Site use issues	Resolving technical difficulties Information about goals/rules of moderation Information about who we (CeRI) are
Policing	Redact/quarantine Civility policing
Wrong venue	Directing commenter outside the site
Stimulate discussion	Encourage users to consider and engage comments of others Posing question to the community that encourages other commenters to respond
Substance education	Providing substantive information about proposed rule Correcting misstatements or clarifying what agency is looking for Pointing commenter to relevant information in primary documents or other data sources
Mentoring effective commenting	Pointing out characteristics of effective commenting Asking for more information, factual details or data Asking commenter to consider possible solutions/alternative approaches Getting off-topic commenter to engage the issues Asking for elaboration Asking for clarification
Organizing discussion	Directing user to another post within the rule

Facilitative moderation differs radically from the "policing" moderation common on US public participation websites. On RegulationRoom, moderators are frequent, visible voices in the discussion. At the same time, we emphasize a unified, objective "moderator persona." Moderators are advocates for and keepers of the *process*. Their job is to facilitate a "knowledge building community" that supports learning about, participation in, and access to the rulemaking process. They model (and, in the very few cases it has proved necessary, remind users of) the kind of thoughtful, inclusive

engagement that we try to cultivate as the site norm. Most important, they strive not only to be neutral but also to be *perceived by users* as being neutral about the wisdom of the proposal.

Research goals of moderation include not only assessing the success of traditional "face-to-face" facilitation techniques in the online environment, but also experimenting with natural language processing approaches to identify comments requiring intervention. (Cardie et al. 2012) Initially, automation would assist human moderation; eventually, it may allow creation of synchronous, automated comment support interfaces.

Site design and functionality supports moderator efforts. Giving users the ability to rate or recommend a comment is a proven inducement to engagement in an online community. (Farzan et al. 2009) Nonetheless, we made the deliberate choice not to encourage "rulemaking as plebiscite" by including any sort of user voting or ranking mechanism. *Moderators* can "recommend" comments that illustrate effective commenting, and this designation both reinforces desired site norms and teaches effective participation. Recently, we added an "Endorse" function (i.e. "Endorse comments that do a good job making of a good point"), based on post-rule survey evidence that some users did not comment because others had already made the point they would have made. We added "Endorse" to give such community-minded "lurkers" a method of participating if they wish. (Nonnecke and Preece 2001) So far, about 25% of endorsements are made by users who do not otherwise comment, suggesting that the functionality is fulfilling an important role for some participants.

3. Results and observations on the first three rulemakings

Table 2 presents participation data from the first three RegulationRoom rulemakings.

Table 2: Participation data

Rule	Length of comment period (days)	Unique visitors	Visitors who registered	Number of comments	Number of users who commented
Texting	34	3665	54	32	18
APR	110	19320	1189	931	348
EOBR	106	5328	121	235	68

3.1 Data about interests and rulemaking experience

At registration, participants were asked about their "interest" in the rule (see Tables 3-5). Answering this question was optional; response rates were 37% (Texting); 52% (APR); and 85% (EOBR). More than one interest could be selected, although for the most generic category (first in each table), the reported number of users is those who selected *only* that interest. Participants were also asked about their federal rulemaking experience; response rates were 100% in Texting and EOBR and 92% in APR.

Table 3: Texting Rule

Declared Interest	n
Member of the driving public	6
Trucking industry owner/operator	6
Working for state or local government	2
Member of advocacy group	2
Researcher/ expert	1
Other	3

Total	20

98% of Texting Rule registered users reported either no previous rulemaking experience or not being sure whether they had any.

Table 4: APR Rule registered users

Declared Interest	*n*
Air Traveler	566
Work for US Carrier	7
Work for travel agent/global distribution system	4
Researcher/expert	7
Advocacy group	1
Other	36
Total	621

94.5% of APR rule respondents reported either no previous rulemaking experience or not being sure whether they had any.

Table 5: EOBR Rule registered users

Declared Interest	*n*
Member of the public	9
CMV Drivers	54
CMV Owner/Manager	61
Law Enforcement	2
Advocacy group	3
Researcher	1
Other	4
Total	134

73.6% of EOBR Rule registered users reported either no previous rulemaking experience or not being sure whether they had any.

3.2 Observations

3.2.1 Losing the battle for public attention

USDOT expected the Texting Rule to be widely controversial, among both safe driving groups and the 800,000-plus CMVOs who would be at risk of losing their operating license. However, as Table 2 shows, the amount of activity was modest, at best. What happened?

We first noted this rule's atypically short comment period of 34 days; both the APR and EOBR Rules had > 100 day comment periods. We concluded, though, that this was not the principal problem.

About six weeks before the rule opened, the Secretary of Transportation held a major news conference announcing that USDOT had just banned texting by CMVOs. In fact, USDOT was "interpreting" existing trucking safety regulations to cover texting; this was supposed to be a stopgap, distracted-driving response until an actual no-texting rule could be completed. Not surprisingly, this distinction between a stopgap "interpretation" and a detailed legally-binding rule was lost on journalists and the public alike. Our search found more than 1500 online news stories and blogs and 400 online comments around the time of the Secretary's announcement. When the actual Texting Rule opened for comment, however, it prompted less than one-third as many stories and one-tenth as many online comments.

Neither our traditional media nor social media outreach efforts could win the battle for attention once the news cycle had run and public interest had faded. The practical lesson was that well-strategized, concerted communications with the agency are essential to alerting and engaging new voices in rulemaking

3.2.2 The emergence of "power users"

Widely varying degrees of participation are a well-known pattern in online communities. (Preece et al. 2004) This pattern of participation inequality is variously called the "90-9-1" rule, the power-law rule, or Zipf's law (Nielsen 2006): a very small number of commenters make a high number of comments while most users make one or two comments. Although RegulationRoom uses multiple methods to support all users in participating, Figure 1 clearly shows the long-tail distribution pattern:

Figure 1: Relationship between unique commenter and number of comments
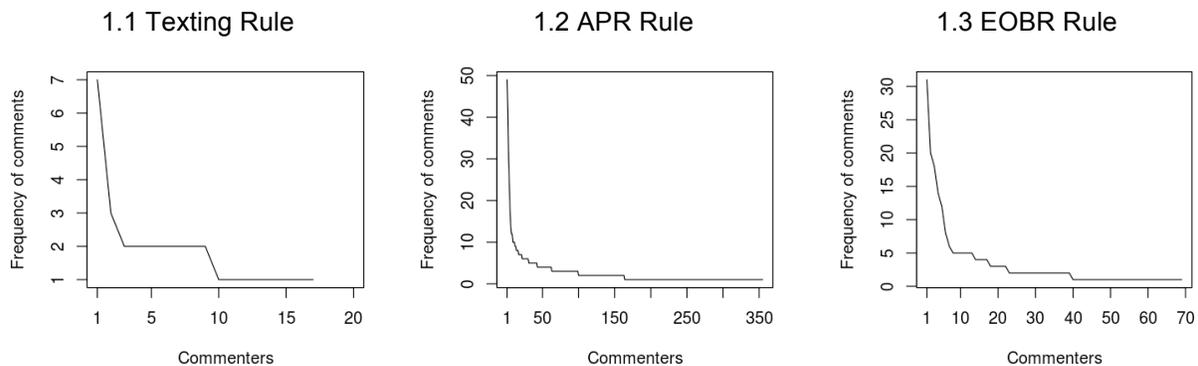
3.2.3 Benefits and costs of "single-issue" participants

The APR Rule demonstrated how a focused group of stakeholders – in this case, peanut allergy sufferers – can leverage social media to disseminate a political call to action. (Aaker et al. 2010) USDOT invited reaction to the possibility of restricting peanuts on airplanes to protect travelers with severe allergies. No specific proposal was made; the agency merely "floated" the idea. The result was completely unexpected. In the first week, the Peanut Allergy post got > 300 percent more traffic than any other, with 44 percent of traffic coming from Facebook. By the end of the comment period, the post had > 3.5 times as many visits as the next most popular, and > 4 times as many users made comments on this post as on the next highest. In total, comments on the Peanut Allergy post equaled those on all other posts combined.

Qualitatively, discussion on this post was the most lively and productive. In three rulemakings, it was the only time moderators needed to remind participants about expectations of civil discourse. Discussion between users was extremely useful, producing dozens of citations to scientific papers. However, the participation of peanut allergy commenters was as narrow as it was intense. Although these commenters were as likely as other commenters to make more than one comment, only 44.3% of them commented on other issues, compared to 67.6% of non-peanut allergy commenters.

3.3 More participation with value?

It is hard to identify clear measures by which to gauge the success of RegulationRoom efforts to alert and engage new participants in rulemaking. The process is completely unfamiliar to most people and making effective comments can be quite demanding. The very large proportion of registered users who report never having participated before in a federal rulemaking (or not knowing whether they participated – which seems to us functionally equivalent) is very encouraging. Our multi-method outreach and support strategies do seem to bring new voices into the rulemaking process, even if not in the numbers we had hoped.

Are RegulationRoom commenters making "better" comments than comparable, inexperienced commenters in the conventional process? We are attempting to develop a coding scheme for comment "quality" to provide a quantitative measure, although this is proving surprisingly difficult. Anecdotally, rulewriters in all three rules – including individuals who were skeptical about the benefits of the project – have praised the usefulness of RegulationRoom comments. In at least one rule, they provided several examples of new relevant knowledge not found in comments from the conventional process. We believe that the kind of on-the-ground, "situated" knowledge possessed by individuals and small entities directly affected by regulation is likely to be the principal substantive value added by successful efforts at online public participation.

We also observe that moderation seems to matter. Between 60% and 70% of moderator interventions designed to elicit further information or discussion (vs., e.g., interventions designed to resolve site use questions) generate responsive comments from either the targeted user or another commenter.

What about from the perspective of users? RegulationRoom suffers from the pervasive difficulty of getting users to respond to site experience surveys. Our efforts to date have not generated large enough samples to be significant, but aggregated responses from three rulemakings show that users report that their RegulationRoom experience gave them a better understanding of: (1) the rulemaking process (50% yes; 30% no; 20% already knew about process); (2) what the agency is trying to do (74% yes; 15% no 11% aren't sure); and (3) the arguments of other commenters (83% yes; 10% no; 7% not sure). This kind of civic engagement value seems a relevant measure of success, and our future efforts will focus on better ways to collect such data from users.

4. Conclusion

Initial experience offering selected "live" agency rulemakings on RegulationRoom gives cause for optimism about using ICTs to broaden public participation in the domain of complex government policymaking. The overwhelming percentage of those who comment are new to the rulemaking process, and at least anecdotal evidence from agencies is that this new participation has value.

At the same time, the RegulationRoom experience cautions that the challenges are considerable and may not be fully appreciated by government leaders. Motivating individuals to participate in an unfamiliar process – one that requires considerable investment in time and attention – has proven far more difficult than even we anticipated. Making complex government policy issues accessible to laypersons requires carefully designed technical and human support. In particular, moderation

matters, both in helping commenters obtain needed information and in nudging them to make effective comments. Natural language processing techniques almost certainly can make moderation less effortful, but it is not realistic to expect technology to replicate the value added by human moderators anytime soon. RegulationRoom's most important lesson, we believe, is that broadening effective public participation requires considerable investment – not only from the citizen participants but also from their government.

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