

**BROADENING THE SPECTRUM FOR PARTICIPATION:
LESSONS FROM EXPERIMENTS OF ONLINE PUBLIC ENGAGEMENT
IN RULEMAKING**

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New ICTs + New Media = New Democracy?
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I. INTRODUCTION

Between Twitter revolutions and Facebook elections, there is a growing belief that information and communication technologies are changing the way democracy is practiced. Some view the internet as shifting the principles of political organization by making collective action cheaper and more easily available (Bimber, Stohl, & Flanagin, 2009; Shirky, 2008). Others allude to the “sunlight effect” of internet technologies that make political institutions and politicians more accountable to the public as their actions become more visible and information used for their decision-making is more easily accessible (Coleman, 2009; Schacter, 2009). Others note that adoption of information technologies by government institutions changes their character and their organizational arrangements (Fountain, 2009; Margetts, 2009). Yet others view the internet as altering the polity itself by shifting the power from the center of the communication network to its edges (Mueller, 2010) and by enabling a better informed (Hardy, Hall Jamieson, & Winneg, 2009; Reedy & Wells, 2009) and a more engaged public (Brundidge & Rice, 2009).

In this context, disparities in access and the ability to use the internet are viewed as the basis of flawed democratic processes, particularly of the “imperfect” civic participation by the populace (Mossberger, 2009). Recent developments in the Middle East, labeled by some as the “Facebook Revolution,” further fueled the ethos of the democratizing nature of information technology. In the West, the movement of more government data and services online continuously reinforces the notion of information society where the citizens are engaged in a direct conversations with the powers that be. The popular discourse about the Internet, governance, and democracy tends to focus on technical solutions, while overlooking the social, political, and cultural complexities of civic online engagement. The purpose of this paper is to

delve into what it actually takes to turn internet technology into a meaningful tool for civic engagement.

The paper analyzes Regulation Room, an interdisciplinary research project of Cornell University that offers an online public participation platform that allows interested individuals to learn about and provide input on proposed regulations in the federal agency rulemaking process. Its target audience is those who are traditionally on the “wrong” side of the digital divide when it comes to online civic engagement, specifically those whose voices are missing in the rulemaking process. The paper explains how various aspects of the digital divide in civic participation are addressed through design decision with deliberate care and focused attention on the needs of users who are unfamiliar with the complex process in which they are operating, unsure of every step they are taking, and often skeptical that the value of their participation is worth the effort they put into it. This analysis offers insights into comprehensive thinking about the digital divide and raises important questions to consider in future broadband policy aimed at enhancing civic engagement of the general public.

II. CIVIC PARTICIPATION AND THE DIGITAL DIVIDE

The disparities in access and ability to use the internet are typically referred to as the “digital divide.” Originally rooted in a dichotomous notion of information “haves” vs. information “have-nots,” the concept of the digital divide has been used to analyze information technology-related inequalities within and between countries and regions (Epstein, 2011). When translated into policy, such categorical division results in fundamentally technocratic optimism and in focus on physical access to technology. Thus, early responses to the digital divide were focused on providing computers and internet connection to the have-nots, with the implied

notion that once available, the technology would be put into positive and productive uses spurring political, economic, and social progress (Epstein, Nisbet, & Gillespie, 2011).

Over the years, however, the scholarly debate about the digital divide grew in sophistication as the technocratic view of information technology and the causal relationship between adoption of technology and social outcomes came under increasing scrutiny. Some suggested that the digital divide should be understood as a series of divides (Barzilai-Nahon, 2006; Meredyth & Thomas, 2002) or inequalities (DiMaggio, Hargittai, Celeste, & Shafer, 2004), while others prefer viewing it as a continuum (Warschauer, 2002, 2003) or spectrum (Lenhart & Horrigan, 2003). Some also challenged the attention to access as determinist, utopian, and naïve, warning that the evident demographic disparities have to do with more than just the presence or absence of the technology, and do not simply disappear as ICTs and internet connectivity become more ubiquitous (Gunkel, 2003; van Dijk, 2006). Others have attempted to link the digital divide to the larger forces that perpetuate resource disparities: some see the digital divide as an element of broader waves of political and economic development (Norris, 2001; Pohjola, 2001; Warschauer, 2003), while others see it as a product of cultural imperialism (Chomsky, 2004), Westernization (Schiller, 1992), or an emerging power bloc within the information industry (Chomsky, 2004; Schiller, 1992).

Specifically in the area of civic engagement in political processes and e-government, the digital divide thinking lent itself to the “if you build it, they will come” mindset (e.g. Chen & Dimitrova, 2006). In other words, given the right technological tools members of the public will engage in political processes, and they will do it in a meaningful way (Macintosh, 2004; Reddick, 2005). A recent report by the Pew Internet and American Life Project, for example, suggests that 73% of adult internet users in the US (representing 53% of all US adults) could be

described as “online political users in 2010.” Yet most of the political use of the internet described in the report is about consuming political news, whether from online outlets, campaign websites, or online social interactions (Smith, 2011). While an informed public is an important component in a democratic society, it still does not mean that people effectively engage or interact with the government online. An earlier Pew report (see Smith, 2010) suggested that accessing government information is the most common interaction of US citizens with their government online, followed by consuming some of the government services, such as renewing a driver’s license or auto registration. The most interesting finding for the current study, however, is that 23% of internet users “participate in the online debate around government policies or issues, with much of this discussion occurring outside of official government channels” (p. 2-3). While this proportion is not negligible, the report suggests that there is still a divide to bridge in terms of civic online engagement. Moreover, the report alludes to the inequalities across socio-economic groups in terms of their online engagement with the government policymaking process, where those belonging to the higher socioeconomic strata are more likely to engage.

Employment of online tools for meaningful and productive engagement of the public in policymaking processes, as it is illustrated by the example above, is not trivial. Simply providing the technology to people, who know how to operate it, does not necessarily result in effective engagement. For example, soon after the election of Barak Obama, whose campaign was praised for its use of information technology, his transition team launched a series of initiatives aimed to engage the public in policy processes using the internet (White, 2008). The *Citizen’s Briefing Book* was one of these initiatives where members of the public could contribute and vote for inclusion of items in the agenda of the Obama administration. In this experiment, however, legalization of marijuana came to the top of the list, far above issues such as healthcare and

economy (Johnson, 2009). In other words, this was not the kind of constructive participation the organizers had hoped for.

Similar results were achieved in other online experiments of the transition team and later the administration, as well as in other contexts and countries (e.g. Chen & Dimitrova, 2006; Tomkova, 2009). These discrepancies between the democratic promise of the internet and the mixed results on the ground suggest that a more nuanced story about the digital divide and online civic engagement is to be told. Van Dijk (2005), for example, speaks about the digital divide as an assembly of different kinds of accesses, each shaping and at the same time being shaped by the other. Specifically, he describes motivational access, material access, skills access, and usage access—all positioned within social, political, and economic context and continuously interacting with the characteristics of technology. Traditionally, the digital divide has been addressed in terms of material access; this is the perception behind the “build it and they will come” approach to online civic engagement. Yet, other kinds of access play out in important and unique ways when considered in the context of citizens’ engagement with the government. For example, Van Dijk explains motivational access as a function psychological processes or social context that supports adoption of new technology. He emphasizes the centrality of an consciously recognized need for the technology as well as a potential conflict between the moral and the cultural values of the users and perceived dangers of the new medium. In the context of civic engagement, however, motivational access relates not only to the motivation to use technology, but also to use the technology in order to engage in meaningful political discourse online; each one of these motivations can enhance or limit the other.

DiMaggio et al. (2004) emphasize the centrality of skills in adoption of new technology (see also Hargittai, 2002). Their research allows us to picture adoption of socio-technical

practices as sort of a Maslow pyramid at the bottom of which is the physical access to technology, further up is the basic ability to use the technology primarily for recreational purposes, and at the top is the advanced ability to use the technology for capital enhancing activities. DiMaggio et al. allude to the reflection of social disparities in the digital divide when viewed through the lens of skills. Thus, they demonstrate that those belonging to higher socio-economic strata are more likely to engage in capital enhancing activities, compared to those belonging to the lower socio-economic strata. The Pew report mentioned above suggests that similar tendencies can be observed in online civic engagement where those in positions of social strength are more likely to engage in activities influencing policymaking processes as opposed to merely using government services online or consuming government information. In other words, the digital divide lens may suggest that technology amplifies already existing discrepancies in power. The way online content is often organized further enhances those processes as graphic design often takes priority over usability, thus requiring additional skills and cognitive abilities from the user to ensure meaningful engagement.

Norris (2001) refers specifically to the link between political processes, democracy, and the digital divide. She emphasizes the role of social structures in mediating political activity and the information technology as a mechanism that can reify or challenge those structures. Groups that are traditionally marginalized in political discourse are more likely to be marginalized in the online political discourse as well; the power relations of the offline world are typically transferred online as well. Specifically for online civic engagement with policymaking processes, a lack of understanding of those processes and the “rules of engagement” in their deliberation are significant barriers to broad public participation. Moreover, lack of knowledge

about means of participation in the policymaking activities adds another layer to the technology-based divide.

The notion of the digital divide is ever evolving as a function of changes in technical, social, economic, and political conditions as well as our understanding of the phenomenon. Most notably, one can trace a change from a simplified view of the digital divide as an issue of physical access into a more nuanced view that takes into account skills and context of technology adoption (Epstein, 2011). Now, moving on to discussion of online civic engagement in a country where physical access is less of an acute problem compared to other parts of the world, we need this more expansive view of what constitutes the divide, including one that accounts for all aspects of the divide: motivation, skills, and broader understanding of political processes. The analysis of Regulation Room that follows is arranged along those three aspects of the digital divide and online civic participation.

III. THE REGULATION ROOM PROJECT IN THE RULEMAKING PROCESS

Regulation Room is a website where individuals can learn about and comment on proposed federal regulations. It provides a forum for participation in what is formally known as the rulemaking process. Rulemaking, or the legally-mandated procedure that all federal agencies must follow when enacting a new regulation, contains a mechanism for soliciting public opinion on the proposed rule. This “notice and comment process,” as it is officially known, allows all citizens to see exactly what the agency would like to do and offer their input on the wisdom of the proposal, based on their own experience and understanding of the substantive area to be regulated. On the surface, it appears to be a prime opportunity for widespread direct public participation in government policymaking. In reality, however, the process is dominated by

large industry actors whose lawyers compose complex and sophisticated comments. Few Americans have ever heard of rulemaking; fewer still have ever lent their voice to the process, particularly in a way that is helpful for the agency (Coglianese, 2006; Kerwin, 2003; Lubbers, 2006). It is in this context that Regulation Room emerged, seeking a way to educate, engage, and encourage participation by a broad swathe of the American public in a highly complex policymaking process that for decades has been the sole province of the most sophisticated corporate actors.

Under the Administrative Procedure Act, the post-New Deal law that lays out the parameters of rulemaking, an agency must come up with a proposed rule and present it to the public in a Notice of Proposed Rulemaking (NPRM). The NPRM, which often is around eighty pages long and written at a post-graduate reading level, explains what the agency proposes to regulate and the reasons it believes the regulation is appropriate. Later laws have added to the information the agency must provide, including, for instance, the cost and benefit calculations and the regulation's expected impact on the environment, privacy, and small businesses. Once the NPRM is published in the Federal Register (a daily publication by the federal government) and on Regulations.gov (the government's official e-rulemaking portal), the public may submit comments to the agency, either online or in paper. The comment period usually lasts between thirty and ninety days. At the end of this period, the agency is required to read and consider every comment it receives. When it issues the final regulation, it includes a description of why it chose this regulatory course, in light of the comments it received and the issues, concerns, and opposition raised in those comments.

Under federal law, when an agency chooses a specific regulatory course of action, it must do so based on the data and experiences that are available to it. It cannot decide to issue a rule

simply because a majority of commenters were in favor of it. This requirement of “reasoned decisionmaking” necessitates comments that provide the agency with information about how the proposed rule will work in practice, the impact the rule will have on the affected industry and other stakeholders, and how the rule will help (or hurt) the larger society. Hard data, specific cost estimates, and on-the-ground knowledge are particularly useful for the agency in making its decision.¹

Most comments that come from individual members of the public, as opposed to large industry actors or major interest groups, consist of a mere vote in favor of or against the proposal, or a general public opinion on a proposed rule; however, the agency cannot take mere votes or “sentiment venting” into account when formulating the final rule. As a result, even when average citizens do participate in rulemaking, their participation is largely meaningless in the final decision (Coglianese, 2006; Kerwin, 2003). Yet most do not even realize this, because they are unfamiliar with the rulemaking process and how it differs from the most common form of public participation in democracy, voting.²

Regulation Room is designed to provide an alternative means of participation in the rulemaking process in which individuals can learn about the requirements of the process, the substance of the proposed regulation, and how to participate effectively. Designed and run by a team of researchers and students at Cornell University, the website offers live rulemakings by the Department of Transportation. The Regulation Room team writes a series of blog-type “issue posts” describing the different topics in the rule, based on the NPRM and regulatory analyses.

These posts are written in an accessible manner and point out areas where the agency is

¹ For more information on the rulemaking process generally, see Lubbers (2006) and Kerwin (2003).

² This deficit means that while institutional actors, often from the regulated industry, can hire lawyers to submit detailed comments tailored to what the agency needs, the input of average citizens is lost. The process, then, becomes tilted in favor of regulated industry, and against the concerns of many individuals who are affected by the rule in different ways.

particularly looking for input from the public. Users can come to the site, read the issue posts, and leave comments. A team of active moderators points users to useful materials and tries to help them provide comments that will assist the agency in crafting the final rule, often by suggesting that users include specific data or details about how they see the rule working in practice. The full text of the agency documents, including the NPRM and all regulatory analyses, is available on the site. The site also contains a variety of learning materials to teach users about the rulemaking process, how commenting works, and the functionalities of the site.

Near the end of the notice and comment period, the Regulation Room team creates summaries of the discussion that has occurred on each of the issue posts. In summarizing, we remain faithful to the words users have written, while at the same time giving more prominence to that information that we know will be more useful for the agency. These summaries are posted on the site, and users can comment on them to point out areas where they think the summaries fail to take account of, or misrepresent, something that was said during the discussion. The summaries are amended and then submitted to the agency on the last day of the notice and comment period as a formal comment. Like all other comments it receives, the agency must read the Regulation Room comment and respond to its criticisms and proposed alternatives when issuing the final rule.

Over the last two years, Regulation Room has completed three live rulemakings on the site, as well as one beta rulemaking: a beta test on a previously-issued proposed rule governing labeling for car tires, and live rules on texting by commercial motor vehicle drivers (the “texting rule”), airline passenger rights (the “APR rule”), and required use of electronic on-board recorders in commercial motor vehicles (the “EOBR rule”). As of late September, Regulation Room features a fourth live rule, on accessibility standards for airport ticketing kiosks and airline

websites. All rulemakings were conducted by the Department of Transportation or one of its sub-agencies. The number of visitors to the site for each live rule varied greatly, from a low of 1,999 visitors for the texting rule to a high of 24,441 visitors for the airline passenger rights rule.³

In brief, then, civic engagement in the federal policymaking processes illustrates the multifaceted and multilayered nature of the digital divide in this domain. The rulemaking process has inherent barriers to the general public participation, which may be preserved or mitigated through the use of information technology. The rulemaking process is complex and not necessarily transparent to an average citizen; the information that the agency provides to the public, written by government lawyers who are intimately familiar with the subject matter, is extremely lengthy, dense, and often confusing. Yet average citizens do have input that is valuable, and when they are able to provide that input, the agency is required to read it and consider it.

The internet is believed to mitigate some of these barriers by making the relevant information and the rulemaking process itself more accessible; this is the goal of initiatives such as the Regulations.gov website. Yet introduction of information technology into an a priori complex environment can be a double edged sword. The citizens who are most affected by the regulation very well may be members of those demographic groups who often fall victim to the digital divide, and so lack the access, skills, or confidence to jump into the deep end of rulemaking participation online.

The “build it and they will come” approach does not necessarily work in this case, because the barriers to participation are only partially technological (although technology can

³ There are a number of reasons for the variations in the number of visitors. For instance, whereas the notice and comment period for the texting rule was only 30 days, it was 110 days for the airline passenger rights rule. For additional details see Farina, Miller, Newhart, Cardie, Cosley, and Vernon (2011) and Farina, Newhart, Cardie, and Cosley (2011).

help addressing them). In fact, the technical and the non-technical barriers to participation may reinforce each other: Even when the technology is at hand, effective participation in this process is not entirely straightforward, nor is it easily comparable to other government processes that most individuals are already familiar with.

Regulation Room is attempting to intervene in this space with the goal of enabling meaningful online civic engagement. The project is helping to engage individuals in a highly complex policymaking process that most of them have never heard of, much less participated in, by developing a technological platform and practices for its effective use.⁴ At every stage, the project must address a different aspect of the digital divide in online civic participation, starting with issues of motivation, continuing to an assortment of skills-related challenges, and ending with the political participation divide.

IV. LESSONS FROM REGULATION ROOM

Throughout the course of the Regulation Room project, the research team has made deliberate choices in how the site is designed, how the information is presented, how visitors are attracted to the site, and what help they should get in order to make their participation meaningful. These choices, made based on both the needs of the target audience and the specific legal restrictions of the rulemaking process, have led to a platform, consisting of a website and a set of practices, which has allowed hundreds of people to participate in federal agency rulemaking for the first time. Praised within the government as well as by industry leaders and

⁴ According to survey results, 92.5% of registered users for the three live rulemakings on Regulation Room had never participated in a federal agency rulemaking or were unsure if they had done so (likely indicating that they had not).

academics,⁵ Regulation Room both illustrates the complexity of the digital divide in the context of online civic participation and offers strategies to bridge it. The lessons presented below are organized around the three components of the digital divide discussed above: motivation, skills, and broader understanding of the process. As an a priori online enterprise, it was not within the scope of this project to address issues of physical access to the Internet. The lessons offer instructive examples, both for more generally effectively engaging the public in government decision-making on a basis of equality, and for creating online mechanisms for specific forms of public participation in policy processes.

A. Motivation divide

To participate in the rulemaking process, the public should have a clear understanding of the process and its utility; the “cost” of participation in the commenting period should be justified by the anticipated “benefits”; and it should be “worth it” for someone to put the time and effort in commenting on the rule. Thus, the main barrier to participation of the public in the federal government policymaking is lack of awareness and lack of understanding of the rulemaking process. On the face of it, moving the commenting process online makes it more accessible, but at the same time it adds to the “cost” of participation as there are no well-established practices for online participation of the general public in the policymaking process, which implies a learning curve on behalf of the commenter and assumes a level a confidence in her skills of using the internet. Regulation Room focused on addressing the issue of motivation by raising awareness and increasing the transparency of the rulemaking process.

⁵ For its involvement in Regulation Room, DOT received one of six [Leading Practices awards](#) given by the White House after a review of projects across the federal government, and was named one of the [2010 Government Innovators](#) by InformationWeek. In [a report written for the IBM Center for the Business of Government](#), the leaders of *AmericaSpeaks* recognized Regulation Room as an example of a “more sophisticated online platform.”

1. Awareness

Raising awareness of a particular rulemaking means developing and employing an outreach plan that targets the interested parties, particularly those who have been traditionally underprivileged in the rulemaking process. When designing an outreach plan for an online consultation process, however, Regulation Room had to be careful to avoid exacerbating existing inequalities by falling victim to assumptions about internet use that privilege those who already participate while continuing to ignore the majority who do not.

To raise general awareness, as soon as a new rule opens on Regulation Room, the team sends out a traditional press release packet to various organizations that represent relevant stakeholders or their interests. These organizations are asked to tell their members and followers about the opportunity to participate in a rulemaking that affects them on Regulation Room. We suggest that they put information about Regulation Room in their newsletters, tell local group leaders to make announcements at meetings, and include it in any materials they send out to their members about the rulemaking. Several weeks later, we follow up with these groups via phone calls to ask if they have shared our information, and if so, how. We offer any additional help or suggestions they might need. Depending on the length of the notice and comment period, we might call again a month later to once more encourage the organizations to use their various communication channels to tell their members about Regulation Room before the end of the notice and comment period. We know that at least one stakeholder group for the EOBR rule included information about Regulation Room in its newsletter, because a user reported that he had learned about the site through the organization's newsletter.

Online, Regulation Room focuses on identifying and exploiting the ties provided by existing communities. While some members of different stakeholder groups may not have a strong online presence, many other members are highly sophisticated in their access to, skills on, and use of the internet. Social media, such as Facebook and Twitter, as well as targeted advertising, such as Google Ad Words, allowed us reaching relevant stakeholder groups in their “natural online habitat.” We identified groups of stakeholders who had online presence and approached them asking not only to engage with the rule on Regulation Room, but also to leverage their online presence to raise awareness of the currently happening rulemaking. We allowed users to “share” our site, issue posts, and individual comments with their peers on various social networking sites. We also contacted bloggers who focused on the issues under consideration and asked them to share information about Regulation Room with their readers. These methods, targeted at those who were already on the more sophisticated end of the spectrum in terms internet access and skills, but often lacked the motivation to use the web as a tool for government participation, appear to have been highly successful, particularly in the EOBR rule: two of the top sources of traffic to the site were Facebook and Twitter.⁶

DiMaggio and van Dijk both observe that one of the greatest predictors of whether an individual will have internet access and skills and will use them for “capital-enhancing” purposes is whether or not the individual’s friends, relatives, and coworkers have adopted similar uses of the internet (DiMaggio, 2004; van Dijk, 2005). If Regulation Room is able to convince some members of a community or network to adopt online public participation through Regulation Room, it is more likely that other members of the same community or network will follow. In survey results, users told us that they shared information about Regulation Room with others

⁶ Other top sources of traffic were search engines (Google, Yahoo, and Bing), the website of the Digress-It plug-in used on the site, the Cornell Law School site, and the Department of Transportation site. The most common way people got to the site was by typing the URL into the address bar.

through a variety of means, including email, on a webpage, on Twitter and Facebook, and by making an announcement at a conference. At this point, there is no way to definitively determine whether adoption of participation in rulemaking via Regulation Room sufficiently permeated the relevant stakeholder networks to reach the “tipping point” at which it becomes so common that members of the network feel they are missing something if they are not using it. Nonetheless, Regulation Room’s increasing successes at inducing participants to tell others in their communities about the site is certainly a positive sign, and with new efforts the trend should grow in future rulemakings.

To address the fact that many of those parties who are traditionally underprivileged in the rulemaking process are not necessarily active online, we do non-internet outreach to various interest groups. For example, during the EOBR rule, someone on the Regulation Room team did an interview with a truck drivers station on satellite radio. (Many truck drivers listen to satellite radio, even if they do not have regular internet access, while they are on the road.) We also send our information to with special-interest print publications, such as Land Line Magazine during the EOBR rule, and then follow up with them, asking them if they are willing and able to publish information about Regulation Room before the end of the comment period.

2. Increasing process transparency

The complexity of the rulemaking process and its image as a highly bureaucratic endeavor add to the lack of awareness and experience with the rulemaking process among the general public. Taken together, these factors increase the perceived “cost” of engaging in the policymaking process. Consequently, making the rulemaking process itself more transparent should lower the anticipated costs and positively affect stakeholders’ motivation to participate.

To increase the transparency of the rulemaking process, Regulation Room contains a “Learn More” page that gives a one-paragraph overview of what rulemaking is; the user can expand the paragraph to get a more in-depth lesson on the process. If a user wants more detail still, there is a link at the bottom to a step-by-step description of everything that happens when an agency makes a regulation. In addition to a description of the steps of the rulemaking process, there is a section on effective commenting. This section explains what federal agencies are looking for in public comments on proposed rules, and what goes into a good comment. The information on the “Learn More” page is written by the Regulation Room team at a high school reading level. On the website home page, links to the Learn More pages are prominently displayed and clearly marked with questions such as “How does rulemaking work?”

The efforts taken by Regulation Room to increase the transparency of the rulemaking process may be necessary, but not sufficient. The Learn More page attracts very few visitors, and those who do view it stay there for a limited time. For instance, in the EOBR rule, only 2.9% of page visits were to the Learn More pages, and the average time spent on those pages was 1.29 minutes, compared to 2.32 minutes for all pages on the site. In the airline passenger rights rule, visits to the Learn More pages accounted for only 0.37% of all page views, and users spent 1.25 minutes on those pages, as compared with 3.17 minutes on all pages on the site.

B. Skills divide

Skills to use the computer and the internet have long been recognized as an important factor in people’s ability to utilize web-based opportunities for their social, political, and financial capital enhancing activities (DiMaggio et al., 2004). Those who are more affluent online are more likely to engage the government, beyond pure consumption of its services and

information (Smith, 2010). Yet, for such a specific and well-defined activity as rulemaking, general internet skills may be not enough, and in fact, too much of the Internet culture may impair effective participation in policymaking. On Regulation Room, the users must not only be able to use the functionality of the site and know how to interact with a social, content-oriented platform, but also know how to make an effective comment that will be useful for the agency. Regulation Room focuses on addressing the issue of skills by making explicit efforts to lower the technical skills threshold and develop practices that enhance users' process-relevant skills.

1. Technical skills

One of the primary goals of Regulation Room is to engage individuals who have never participated in the rulemaking process before. Thus, the goal of the platform design was to streamline the usability in the service of the process. We could not make choices based on the assumption that users would be familiar with functionalities that serve the rulemaking process, such as those at the base of the federal government's e-rulemaking portal Regulations.gov. (Those functionalities include a particular way to access various rulemaking documents, read other users' comments, and leave comments of one's own.) One of the first issues Regulation Room dealt with in coming up with initial designs for the site was how to give a prominent place to the main functions of the rulemaking process: learning about the agency's proposal, and providing input on the proposal. Regulation Room also offers a third focus that, while available on Regulations.gov, is not highlighted there: the ability to read other users' comments and respond not only to what the agency has said, but also to what other stakeholders have said. Each of these functions needed to be readily apparent to all users, particularly those who were unfamiliar with the different functions that could be performed on a government participation

website. Users who do not even know a certain function exists will not go looking for it. This is especially true for users who are not confident in their online skills, who have limited access to internet, and who have little or no experience with interacting with the government online.

While more experienced internet users with more time and confidence may be willing to explore a website, looking for the relevant information and experimenting with how the site works, many users will not.

The current, fifth, version of the website design accords equal prominence for the descriptions of the agency's proposal and the commenting function. Based on a Wordpress platform, we accomplished the goal of simple design that highlights the main functionality by using the Digress-It plug-in, which divides the page in half vertically and puts the issue posts on the left half of the page and the commenting function (including other users' comments and the comment box where users could add their own) on the right. Presenting users with the basic tools they would need to effectively participate immediately as soon as they arrive at a rule-specific page eliminates initial barriers, such as time and navigation skills, that would otherwise be needed to discern how the site works.

Furthermore, even where it felt redundant to the designers, we included directions on how different functionalities worked. For instance, after receiving feedback from users that they did not know how to comment, we took steps to make it easier for users to figure out how to comment. Once a user is logged in, she sees text in the comment box that says, "Click here to comment." We changed the wording of the button under the comment box from "Submit" to "Submit comment" and made the color contrast stronger. We added a "How do I comment?" link underneath the comment box that, when clicked, opens a video explaining how to comment. To further clarify what the text on the left side of the screen, under "Agency Proposal," is, we added

a line that explains it is “by the Regulation Room team based on the NPRM.” In sum, by streamlining the navigation and highlighting the main functions of the platform, we aimed to lower the online skills requirement from Regulation Room users.

2. Process skills

Most users come to Regulation Room with little, if any, familiarity with the rather arcane process of federal agency rulemaking. Survey data suggests that upwards of 90% of visitors to the site have never participated in a rulemaking before. Many users who first come to the site assume that rulemaking is like voting, so that expressing their opinion on the rule is all that is required. One of the most difficult educational tasks Regulation Room faces is to counter this “voting instinct.” So, in addition to the often complex substantive subject matter of the proposed rule, voters must contend with a public participation process that on the surface appears similar to voting, but in reality is entirely unfamiliar. To address such process-related difficulties, Regulation Room employs a series of technical and procedural solutions.

Some of the technical solutions were also aimed to lower the skills requirements related to the rulemaking itself. In other words, these solutions intended to assist the users in making meaningful comments. For example, the Digress-It plug-in also allows to “dissect” the lengthy rule into subtopics and sub-subtopics. If a user is interested in on specific aspect of the proposal, she can click on the relevant Digress-It section within an issue post and see what other users have been saying about that aspect, and add her own targeted comments. At the top of each issue post, there is a list of sub-topics, and by clicking on the topic they are interested in, users are taken to that specific paragraph and its accompanying comments. Given the wide range of issues often covered in a rulemaking proposal, and the cognitive complexity of many of them, giving

users easy access to only those issues that interest them or affect them directly represents a major interface innovation to increase accessibility for all users. Furthermore, allowing users to highlight just one Digress-It section and see only the comments associated with that section cuts down on the amount of text on the page.

While the Regulation Room team strives to ensure that the issue posts contain all the information most users will need to make educated and effective comments on the proposal, it is still important to provide access to the full text of all rulemaking materials. There is a line at the end of each section in the issue posts that says, “You can see what the agency had to say here,” and includes a link to the section of the NPRM or rulemaking analysis that is described in that portion of the issue post. As a further means of making users aware of and giving them access to the agency documents, on version four we created a system of tabs at the top of the webpage that users could click on. The tab that is open by default when a user goes to a section of the rule is the issue post tab. There is also a tab labeled Agency Documents, however, that users can click on if they wish. Prior to introducing the tab design, agency documents could be accessed via an inconspicuous link at the top of each issue post. The introduction of the tab system resulted in a marginal increase in views of agency document pages. This could mean that the agency documents are still too difficult to find or, more likely, that very few users feel a need to access those pages.

The technical solutions, however, provide only a partial answer to the process skills deficit; active moderation of the comment space is a pivotal component of the Regulation Room solution. Very few Regulation Room users visit those pages on the site with explicit educational materials; much of the education about the rulemaking process must be done by the moderators. Moderators are trained to respond to users who simply say, “This is a bad idea!” with an

explanation that rulemaking is not a vote and some tips on providing information that is useful for the agency. Similarly, when a user suggests that the agency take a course of action that is outside the scope of the current proposed rule, or is indeed outside the scope of authority that Congress has granted to the agency, moderators explain that the agency cannot do what the user has suggested and guide the user back to the proposal under consideration.

In the most recent rule, we added a feature of “recommended comments” as another means of implicitly conveying to users how to provide effective comments. Comments chosen by the moderators display a small heart, and on the issue post, users can sort by recommended comments. On the site home page, users can view a feed of recent recommended comments. Moderators recommend comments that are easy to understand, contain reasons for the position the commenter takes, and include facts, data, or personal experiences that support the commenter’s stance. Often in a response to a recommended comment, a moderator will commend the commenter for one or more of the features that earned the comment a recommendation. Giving users examples of good comments in the rulemaking process, in addition to pointing out what makes these comments useful to the agency, teaches users about some aspects of rulemaking, without requiring them to take the initiative to go read about it explicitly.

Both moderator techniques and the recommended comment feature show users who may be hesitant to participate out of fear that they do not fully understand the process an opportunity to see how rulemaking, specifically the commenting portion, plays out in reality. Moderators always adopt an encouraging tone, even when correcting users’ misunderstandings about the process, eliminating some of the intimidation inherent in leaping into an entirely unfamiliar

policymaking context. And by modeling their comments after recommended comments, more cautious first-time users can feel more comfortable that they are “doing it right.”

C. Political participation divide

The third aspect of the digital divide that is relevant to online civic participation is more general political participation divide. It is not only the lack of knowledge of the rulemaking processes that poses a hurdle in the way of public participation in the process; rather, it is also the more broadly defined misunderstanding of the political process and perhaps even mistrust in the ability to make one’s voice heard that prevent people from effective participation in the policymaking processes. In addition to the steps aimed at making the rulemaking process more transparent, Regulation Room addresses some of these broader barriers by recognizing the variety of ways people may engage with the rulemaking process; by focusing on the language barrier between the agency and the public; by ensuring that the users make their voice heard with the agency; and by acknowledging the concerns citizens have in their interactions with the powers that be.

1. Acknowledging the variety

Regulation Room was built and is maintained on the assumption that users who come to the site will have widely varying competence levels, in terms of internet skills, familiarity with the rulemaking process, and knowledge of the substantive area of specific rules. The site is designed to allow all users to participate at a level that they are both capable of and comfortable with. As a result, we try to incorporate various access points for the information, as well as make available different levels of information complexity and depth.

The Regulation Room homepage is broken up into a series of images, small text blocks, and links to provide users with a variety of access points to the information available on the site. Running across the top, underneath a brief description of the rule and an accompanying graphic, are links to different issue posts in the rule, with the direction to “Click on what interests you most.” Feeds of recommended and most recent comments are accompanied by “Go to text” links that take the user directly to the comment in context. These features allow users to easily see what different topics are available on the site, and how the site is used by others. Users can immediately dive into areas of interest, if they feel comfortable doing so based on what they see on the site home. Some users may be more attracted by the comment features and so will choose to access the issue posts by clicking the Go to text link under a recent comment. Others may prefer to read the description of the rule and click on a text link to an issue post topic. Still others may be uncomfortable immediately engaging with the substance of a rule, and so there are prominent links on the home page to learn more about the rulemaking process, effective commenting, and the website.

For example, for the Airline Passenger Rights rule, which contained a number of insular issues that could be easily separated from each other, the home page included a poll, asking users to click on the topic that interested them most. Each choice option in the poll was accompanied by a small representative image. When users clicked on one of the choices, they were given the option to go to the issue post that discussed that topic. Users could click on multiple choices, if they wished. The poll was not scientific and was not used to report data to the agency; its sole purpose was to provide users with another way to access the different issues in the rule, without clicking on the text menu of issues. This mechanism, asking users what interested them most and providing eye-catching images, as well as the opportunity to select what was most important

in the rule, was more appealing, and perhaps more familiar, to some users than a text list of topics.⁷

Once a user arrives at an issue post, he or she immediately sees the two-part page format featuring both the text detailing the agency's proposal and others' comments. A menu across the top of the page provides easy navigation to different issue posts, as well as to other sections of the site, such as agency documents for those more advanced users who want to read the full text of the agency proposal and any accompanying regulatory analyses. The issue posts contain links to the agency documents, other laws, and additional information for users who want to dig more deeply into the material. For users who need additional help understanding the content of the proposal, terms of art and more unfamiliar vocabulary related to the rule are underlined with a dotted line. A definition or brief description appears when the user places the mouse over one of these terms.

2. The language barrier

The complex language and the highly professionalized jargon used in federal rulemaking constitute another barrier to broader public participation in the policymaking process, even though the possibilities exist through outlets such as the Regulations.gov portal. Thus, in addition to choices about the website interface and the technology used on the site, the Regulation Room team has made deliberate decisions in how the substantive content of a proposed rule is conveyed to the public. The content presented is intended to be accessible to users with a variety of education levels, internet skill levels, and degrees of understanding of the rulemaking process and the substantive subject matter of the rule. Recognizing that many users lack what Wilson

⁷ Unfortunately, due to a programming glitch, we were unable to record the number of users who clicked on the poll and accessed the issue posts through the links on the poll, as compared to those who clicked on the text list of issues.

calls the “inequality of cognitive access” (Wilson, 2000) or, as DiMaggio et al. (2004) describe it, “the extent to which users are trained to find and evaluate the information they seek” (p.377), we have instituted multiple mechanisms to help users both locate and make sense of relevant information regarding the proposed rulemaking.

The majority of the substantive content on the site is presented in the issue posts. These posts, written at a high school reading level, are written with the assumption that the reader has little or no knowledge of the subject the agency plans on regulating. The posts pull out the most important information included in the very lengthy and confusing notice of proposed rulemaking and regulatory analyses and are written in a less formal, more conversational tone that is easy to understand and follow. Furthermore, the issue posts highlight, in the form of questions, information that the agency in particular hopes to gain from the notice and comment process. Simple and straightforward questions are obvious signals to even the least sophisticated users that this is a place where input is wanted.

3. Meaningfulness

One of the main hurdles in the way of public participation in the policymaking processes is the skepticism that one’s voice can actually be heard in the large-scale bureaucratic endeavor such as the rulemaking. In the context of Regulation Room, this concern is mitigated primarily through moderation practices aimed to produce better comments. To assist users find information that will help them understand the agency proposal and offer helpful comments, moderators point users to information they might find helpful. Moderators are trained to look for clues to the user’s approximate level of technological sophistication and degree of familiarity with both the rulemaking process and the substantive area under consideration. Moderators then choose the

approach they take with users based on the information the user has provided and the capacity the user has displayed for engaging with the content of the agency proposal in a way that will provide valuable input for the agency. For more sophisticated users, moderators may suggest that they examine specific details of the agency's proposal and respond to any errors or inconsistencies they see. They may ask users to examine previous statements in light of different sections of the agency proposal, or to provide sources or citations for data included in a comment. For users who appear less adept at either making sense of the agency proposal or adding comments that are useful for the agency, moderators may include very simple explanations of the proposal or attempt to focus the user's attention on an area the moderator believes the user may be able to comment effectively on. As a less sophisticated user returns and comments repeatedly, the moderator pushes him or her to engage with the material on a deeper level and conduct a more advanced analysis of it. In this way, each user is encouraged to take advantage of the opportunities offered by Regulation Room in the fullest manner that he or she is capable of.

Many users on the site express frustration that they feel that their voice does not matter and that any participation is futile in the end, either because the process is dominated by powerful interest groups or because the agency has already decided how to act and will not change course. To counter this widespread sentiment, moderators engage in regular encouragement of commenters. They offer frequent "pats on the back" and point out where a comment provides information that is particularly useful for the agency. This technique works not only to encourage further participation on the part of the user whom the moderator is addressing, but also to demonstrate to other users that on Regulation Room, individual citizen participation in government decision-making is highly valued. Users are constantly reminded and

reassured that their voice need not be silenced in the policymaking process, and that participation is not in fact futile.

At the end of the comment period, the Regulation Room team composes a summary of the discussion that has happened on the site. To ensure that users do not feel that those in charge of the website are commandeering their comments and misrepresenting what they have said, there is a draft summary phase during which all users can read the summaries and suggest changes. If a user feels that the summary has misrepresented something that was said on the site, she can offer a correction, and the summary will be amended. This ensures that users feel that their voices are the ones heard in the summary that is sent to the agency, not the voices of Regulation Room team members.

4. Acknowledging the concerns

An array of concerns that are external to the rulemaking process constitutes another layer of complexity in the barrier to effective civic engagement in federal government policymaking. While members of the public are accustomed to consuming public goods and official government information, engaging in a direct dialogue with a federal government agency is a relatively rare practice. People project their prior experiences of interacting with the government agencies, as well as their prejudices and hesitations regarding the policymaking process. To address potential fears, Regulation Room users may, for example, remain entirely anonymous on the website. While registration is required before users can leave comments, they do not have to provide a real name to register. The only identifying information that is required before users comment is collected from two survey questions: whether the user has ever participated in a federal agency rulemaking, and what their interest is in the rule. This data is collected so that

Regulation Room can report to the Department of Transportation the different stakeholder groups represented on the site, and what members of those groups had to say about the rule. Beyond identifying a user as a member of a broad stakeholder group, however, no further demographic or identifying data is collected. In their comments, of course, users may choose to reveal more about their personal experiences and identity, and many choose to do so in order to explain where their knowledge about the agency proposal comes from.

Especially for those users who suffer from what van Dijk (2005) calls a lack of motivation due to concerns about internet use, this anonymity offers an increased level of reassurance that user data is not collected and shared with others. Because van Dijk asserts that intermittent internet users feel they have a more insecure position in society and that internet dropouts feel they have less control over their lives, the protection from secondary negative consequences that anonymity provides may be particularly helpful for these users that have otherwise relatively limited access. They will not feel the increased risk of their employer discovering that they have been participating in a rulemaking that will affect the industry they work in, for example.

For users who are unaccustomed to online interaction with government or online participation in government processes, and especially for those users who have avoided government interactions online due to privacy concerns, Regulation Room's offer of anonymity is particularly attractive. In the government-run notice and comment process, agencies may choose whether or not to accept anonymous comments. Thus, while Regulations.gov users may choose to leave their comments anonymously, there is no guarantee that the government will read their comments and take them into account when formulating the final rule. On Regulation Room, however, users may retain total anonymity, and their comments will still be included in

the official summary sent to the agency. (Regulation Room identifies itself as the entity submitting the comments, so its comments are not considered anonymous by the agency.)

Regulation Room offers those users who may be more uneasy about government participation online a “safe” environment in which they can do so without worries about the government discovering their identity.

IV. REMAINING DIFFICULTIES

Despite considerable successes since its launch in late 2009, Regulation Room continues to face systemic barriers to engaging all individuals who are potentially affected by the rules. Regulation Room has little control over some of these barriers and must, as it has done before, find ways to work around them rather than expect to eliminate them entirely.

A. Reaching the Unreachable

Despite Regulation Room’s best efforts to exploit multiple channels of outreach, both online and offline, it is clear that millions of potential stakeholders either are not receiving the message or are choosing to ignore it. For those who are not receiving it, it could be because they are unconnected with the issue-based networking channels we choose to distribute information about Regulation Room, or because they lack the means to receive the message we are sending. For those who receive information about Regulation Room and why their input is valuable, there are myriad reasons why they choose to ignore the message. They could lack the physical means, skills, or confidence to use Regulation Room. They could instead determine that it is not worth the time and effort, particularly if they feel that their participation is not valuable. With each

subsequent rule, the Regulation Room team, particularly the communications experts, will attempt to chip away at each of these barriers to use of the site.

B. A Problematic Process

Historically, the “public comment” phase of the federal rulemaking process has been dominated by comments from large regulated industries, and trade and professional associations. Participation by affected individuals and by public interest groups occurs (at least in high-visibility rulemakings), but generally these comments do not match the length and sophistication of industry commenters. The fundamental legal requirements of rulemaking themselves tilt the balance towards commenters with the resources to pay for expertise. Agencies are supposed to act based on solid data about the dimensions of the problem, the likely effectiveness of proposed solutions and, in particular, the monetary value of societal costs and benefits. Generating such data—and vetting data provided by industry commenters—can be very difficult for public interest groups, and virtually impossible for individuals. The legal requirement of hard data and strong facts to justify a rulemaking is extremely difficult, if not impossible, for many private citizens to meet.⁸ Multiple users in the EOBR rule pointed out that they do not have the sort of statistics that the agency is looking for, nor would they know where to find them. They did, however, have personal anecdotal experiences that contributed to a fuller understanding of the field that the agency wanted to regulate. When agencies rely too heavily on numbers, as is often required by law, the voices of average citizens, who are neither economists nor statisticians (nor do they have the resources to hire them), will be devalued.

When an affected party is unhappy with the outcome of a rulemaking, its primary recourse is to bring a lawsuit against the agency, often alleging some irregularity in the

⁸ This phenomenon is well-documented in the literature (e.g. Coglianese, 2006; Kerwin, 2003).

rulemaking process that produced the undesired result. For large industry actors, lawsuits are a viable option, if the economic incentives are great enough. For average citizens who are unhappy with the outcome of a rulemaking, however, lawsuits are rarely, if ever, cost effective. This, potentially, adds to citizens' feelings of voicelessness and the sense of futility in participation: whereas large entities have recourse if they feel their voices are not heard and accounted for, individual citizens do not.⁹

In the end, there is little that Regulation Room can do to change the legal requirements of the rulemaking process or the ways in which citizens can challenge the government's failure to adopt their desired regulatory course of action. However, we could likely improve our strategies for encouraging users to provide whatever input they can that informs the agency of the consequences of various regulatory options. We could likewise develop new strategies to reassure users that their participation is meaningful, even though it might not have the precise impact they hope it will.

C. Simplifying Without “Dumbing Down”

The intricacies of the rulemaking process and the complexity of the descriptions agencies provide of their proposals simply are not accessible to the majority of Americans. Regulation Room goes to great lengths to “translate” each notice of proposed rulemaking into something that most people can understand. The descriptions of the rulemaking process and what it requires that are available on the site have been painstakingly prepared by law professors and

⁹ Compounding this problem is an emerging trend in administrative law jurisprudence granting standing to sue to those potentially injured by a regulation (often, though not always, a large company or other industry actor), but not to potential beneficiaries of the regulation (often, though again not always, average citizens) (e.g., *Lujan v. Defenders of Wildlife*, 1992; *Bennett v. Spear*, 1997; *National Credit Union Administration v. First National Bank & Trust Co.*, 1998; *Summers v. Earth Island Institute*, 2009). When the courthouse doors are effectively locked to citizens who feel the government has not listened to their opinions, citizens are even less likely to feel that voicing their opinions in the first place is a fruitful exercise.

law students who understand the process well and are able to describe it in a simple, straightforward manner. Regulation Room is, in effect, caught between Scylla and Charybdis: on the one hand, the site is dealing with a very complex policymaking process that is seeking to resolve difficult problems involving myriad conflicting considerations; on the other hand, the intended audience of the site is those individuals who are entirely unfamiliar with rulemaking, who have not had the skills or confidence to participate in the past, and who may have less education and fall into demographic groups that typically fall victim to the digital divide.

The task, at which Regulation Room sometimes fails, is to make rulemaking accessible and comprehensible to users with a wide array of knowledge and skills, without over-simplifying so as to misrepresent the agency proposal or the role of the public in rulemaking. Giving users who have typically been disadvantaged or underprivileged in the rulemaking process inaccurate information and leading them to form incorrect assumptions about their process and their role in it only exacerbates existing inequalities of the system. Regulation Room chooses to do rules that do not require highly technical knowledge because translating the rulemaking materials for such a proposal into a product that most stakeholders can understand would be impossible. Yet the individuals affected by highly technical rules are not less deserving of the opportunity to learn about and comment on a proposed policy that impacts them.

V. RECOMMENDATIONS

Over the last two years, Regulation Room has produced enough experiences and data to allow us to make several recommendations on bridging the digital divide both in the rulemaking context specifically and in online participation in government policymaking processes more generally.

A. Provide Motivation

Many non-users decline to use the internet for government participation such as rulemaking because they see no motivation for doing so. Their social networks do not use the internet in this way, they do not think it will be useful, and they feel their voice is not important. For van Dijk, a lack of “motivational access” is the first in a series of access deficits that result in the digital divide. Invest time, energy, and other resources communicating, both online and offline, through the participation platform and other channels, why non-users should be motivated to participate, and why their participation is valuable.

B. Focus on the Skills Needs Potential Users

Even where individuals have the motivation to participate, the means of participation is often a poor “fit” for what people may need. Do not assume any specific level of technology skills; rather, provide a mechanism for users to learn any necessary skills in a straightforward and non-threatening manner. Offering mentoring may be particularly effective, although often very costly. By identifying the skills that potential users may lack, platform designers can create a system that is not completely inaccessible to a large number of users. The platform design decisions should be based on the assumption that individuals will need education about the platform, the process, and the substance. Particularly where the intended audience is those whose voices are often underrepresented in the government decision-making process, additional skills education and mentoring may be particularly necessary; otherwise, the system may merely reinforce existing privileges.

C. Design for Varying Levels of Participation

Some users will come to the platform with more advanced capabilities, whether in internet skills, process understanding, substantive knowledge, or inclination to participate. What these users have to say is valuable, but it should not be assumed that because of greater sophistication, their input is necessarily *more* valuable. Create links between more and less sophisticated users, so that they are able to learn from each other and the overall level of sophistication, capability, and knowledge rises. Do not assume that participation in government, particularly certain forms of participation, is inherently desirable for all users. For users who are not capable or are particularly wary of high levels of engagement in the process, allow for lower levels of engagement that still add value and, at the same time, raise the confidence of those users in the process and their role in it.

D. Identify desired technological innovations

Creating a successful online public participation platform is costly: It requires significant input of time and resources. As technology becomes more advanced, the overall costs for all sorts of interactions and processes are lowered. Apply this principle to the desirable features on participation platforms, and look for ways that technological advances can lower the costs. At Regulation Room, computer and information scientists are experimenting with natural language processing and recommender systems to automate many of the moderator functions, eliminating the need for around-the-clock moderation by live people. Similar initiatives dealing with other highly effective but costly elements of public participation websites are needed to make these sites scalable for use across the government.

VI. CONCLUSION

Producing a successful mechanism for online public participation in government decision-making by individuals who span the spectrum of digital skills is extremely difficult. It goes far beyond creating “a simple discussion forum,” as a former senior White House official once (incorrectly) described Regulation Room. The Regulation Room website is the result of two years of concentrated effort by a cross-disciplinary team of senior faculty members and researchers at one of the top universities in the world. The resources necessary to create such a system are substantial, and initial outcomes may disappoint. With careful design choices, a focus on the needs of the end users, and sufficient motivation for otherwise reluctant participants, however, it is possible to create a platform that facilitates wide-scale participation in government. And as research into this field continues to expand, building on the successes of other projects will become easier, and subsequent efforts should be increasingly fruitful.

VII. BIBLIOGRAPHY

Lujan v. Defenders of Wildlife, 504 U.S. 555 (1992).

Bennett v. Spear, 520 U.S. 154 (1997).

National Credit Union Administration v. First National Bank & Trust Co., 522 U.S. 479 (1998).

Summers v. Earth Island Institute, 555 U.S. 488 (2009).

Barzilai-Nahon, K. (2006). Gaps and bits: Conceptualizing measurements for digital divide/s.

The Information Society, 22, 269-278.

- Bimber, B., Stohl, C., & Flanagin, A. J. (2009). Technological change and the shifting nature of political organization. In A. Chadwick & P. N. Howard (Eds.), *Routledge handbook of Internet politics* (pp. 72-85). New York, NY: Taylor & Francis.
- Brundidge, J., & Rice, R. E. (2009). Political engagement online: Do the information rich get richer and the like-minded more similar? In A. Chadwick & P. N. Howard (Eds.), *Routledge handbook of Internet politics* (pp. 144-156). New York, NY: Taylor & Francis.
- Chen, Y.-C. C., & Dimitrova, D. V. (2006). Electronic government and online engagement: Citizen interaction with government via web portals. *International Journal of Electronic Government Research*, 2(1), 54–76.
- Chomsky, N. (2004). *Hegemony or survival: America's quest for global dominance*. New York, NY: Henry Holt.
- Coleman, S. (2009). Technological change and the shifting nature of political organization. In A. Chadwick & P. N. Howard (Eds.), *Routledge handbook of Internet politics* (pp. 86-98). New York, NY: Taylor & Francis.
- Coglianesse, C. (2006). Citizen Participation in Rulemaking: Past, Present, and Future, *Duke Law Journal*, 55, 943-968.
- DiMaggio, P., Hargittai, E., Celeste, C., & Shafer, S. (2004). Digital inequality: From unequal access to differentiated use. In K. M. Neckerman (Ed.), *Social inequality* (pp. 355-400). New York, NY: Russell Sage Foundation. Retrieved from <http://www.eszter.com/research/c05-digitalinequality.html>
- Epstein, D. (2011). The analog history of the “digital divide.” In D. W. Park, N. W. Jankowski, & S. Jones (Eds.), *The long history of new media: Technology, historiography and contextualizing newness* (pp. 127-144). New York, NY: Peter Lang Publishing.

- Epstein, D., Nisbet, E., & Gillespie, T. (2011). Who's responsible for the digital divide? Public perceptions and policy implications. *The Information Society*, 27(2).
- Farina, C. R., Newhart, M., Cardie, C., & Cosley, D. (2011). Rulemaking 2.0. *University of Miami Law Review*, 65(2), 1001-1054.
- Farina, C., Miller, P., Newhart, M., Cardie, C., Cosley, D., & Vernon, R. (2011). Rulemaking in 140 characters or less: Social networking and public participation in rulemaking. *Pace Law Review*, 31(1), 382-463.
- Fountain, J. E. (2009). Bureaucratic reform and e-government in the United States. In A. Chadwick & P. N. Howard (Eds.), *Routledge handbook of Internet politics* (pp. 99-113). New York, NY: Taylor & Francis.
- Gunkel, D. J. (2003). Second thoughts: Toward a critique of the digital divide. *New Media Society*, 5(4), 499-522.
- Hardy, B. W., Hall Jamieson, K., & Winneg, K. (2009). Wired to fact: The role of the Internet in identifying deception during the 2004 U.S. presidential campaign. In A. Chadwick & P. N. Howard (Eds.), *Routledge handbook of Internet politics* (pp. 131-143). New York, NY: Taylor & Francis.
- Hargittai, E. (2002). Second-level digital divide. *First Monday*, 7(4), online.
- Johnson, P. (2009). *Open government: Assessing the Obama administration's efforts to make government transparency a reality*. Cisco Internet Business Solutions Group. Retrieved from http://www.cisco.com/web/about/ac79/docs/pov/Open_and_Transparent_Government_Formatted_120209FINAL.pdf

- Kerwin, C. M. (2003). *Rulemaking: How government agencies write law and make policy* (3rd ed.). Washington, DC: CQ Press.
- Lenhart, A., & Horrigan, J. B. (2003). Re-visualizing the digital divide as a digital spectrum. *IT & Society*, 1(5), 23–39.
- Lubbers, J. S. (2006). *A guide to federal agency rulemaking* (4th ed.). Chicago, IL: American Bar Association.
- Macintosh, A. (2004). Characterizing e-participation in policy-making. *37th Hawaii International Conference on System Sciences* (Vol. 5, p. 50117a). Presented at the 37th Hawaii International Conference on System Sciences, Big Island, HI: IEEE Computer Society. doi:<http://doi.ieeecomputersociety.org/10.1109/HICSS.2004.1265300>
- Margetts, H. (2009). Public management change and e-government: The emergence of digital-era governance. In A. Chadwick & P. N. Howard (Eds.), *Routledge handbook of Internet politics* (pp. 114-127). New York, NY: Taylor & Francis.
- Meredyth, D., & Thomas, J. (2002). Digital divides: Framing the issues. Presented at the International Conference on the Digital Divide: Technology & Politics in the Information Age, David C. Lam Institute for East-West Studies, Hong Kong Baptist University.
- Mossberger, K. (2009). Towards digital citizenship: Addressing inequality in the information age. In A. Chadwick & P. N. Howard (Eds.), *Routledge handbook of Internet politics* (pp. 173-185). New York, NY: Taylor & Francis.
- Mueller, M. L. (2010). *Networks and states: The global politics of internet governance*. Cambridge, MA: MIT Press.
- Norris, P. (2001). *Digital divide: Civic engagement, information poverty, and internet worldwide*. New York, NY: Cambridge University Press.

- Pohjola, M. (2001). *Information technology, productivity and economic growth: International evidence and implications for economic development*. New York, NY: Oxford University Press.
- Pohjola, M.
- Reddick, C. G. (2005). Citizen interaction with e-government: From the streets to servers? *Government Information Quarterly*, 22(1), 38-57.
- Reedy, J., & Wells, C. (2009). Information, the internet, and direct democracy. In A. Chadwick & P. N. Howard (Eds.), *Routledge handbook of Internet politics* (pp. 157-172). New York, NY: Taylor & Francis.
- Schacter, J. S. (2009). Digitally democratizing Congress: Technology and political accountability. *Boston University Law Review*, 89, 641-676.
- Schiller, H. (1992). *Mass communications and American empire*. Boulder: Westview Press.
- Shirky, C. (2008). *Here comes everybody: The power of organizing without organizations*. New York, NY: Penguin.
- Smith, A. (2010). *Government online*. Pew Internet & American Life Project. Washington, DC: Pew Institute. Retrieved from <http://pewinternet.org/Reports/2010/Government-Online/Summary-of-Findings.aspx>
- Smith, A. (2011). *The Internet and campaign 2010*. Pew Internet & American Life Project. Washington, DC: Pew Institute. Retrieved from <http://pewinternet.org/Reports/2011/The-Internet-and-Campaign-2010/Summary.aspx>
- Tomkova, J. (2009). E-consultations: New tools for civic engagement or facades for political correctness? *European Journal of ePractice*, 7, 1-10.
- van Dijk, J. A. G. M. (2005). *The deepening divide: Inequality in the information society*. Thousand Oaks, CA: Sage Publications.

- van Dijk, J. A. G. M. (2006). Digital divide research, achievements and shortcomings. *Poetics*, 34, 221-235.
- Warschauer, M. (2002). Reconceptualizing the Digital Divide. *First Monday*, 7(7).
- Warschauer, M. (2003). *Technology and social inclusion: Rethinking the digital divide*. MIT.
- White, D. (2008, December 22). Team Obama, Technology & Public Engagement | Public Agenda. *Public Agenda*. Retrieved August 13, 2011, from <http://www.publicagenda.org/blogs/team-obama-technology-public-engagement>
- Wilson, E. J. (2000). *Closing the digital divide: An initial review. Briefing the President*. Washington, DC: Internet Policy Institute. Retrieved from <http://www.internetpolicy.org/briefing/ErnestWilson0700.html>