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The Case Against Mass E-mails: Perverse Incentives and Low Quality Public Participation in U.S. Federal Rulemaking

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Abstract

Large-scale e-mail campaigns are a staple in the modern environmental movement. Interest groups increasingly use online mobilizations as a way to raise awareness, money, and membership. There are legitimate political, economic, and organizational reasons for doing so, but these gains may come at the expense of a more substantial and efficacious role for citizens who wish to use e-mail to engage in public participation. This paper situates a close examination of the 1,000 longest modified MoveOn.org-generated e-mails sent to the Environmental Protection Agency (EPA) about its 2004 mercury rulemaking, in the broader context of online grassroots lobbying. The findings indicate that only a tiny portion of these public comments constitute potentially relevant new information for the EPA to consider. The vast majority of MoveOn comments are either exact duplicates of a two-sentence form letter, or they are variants of a small number of broad claims about the inadequacy of the proposed rule. This paper argues that norms, rules, and tools will emerge to deal with the burden imposed by these communications. More broadly, it raises doubts about the notion that online public participation is a harbinger of a more deliberative and democratic era.

Keywords: e-mail, public participation, rulemaking, deliberation

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Large-scale public comment campaigns via electronic mail (e-mail) are a preferred mode of political communication for interest groups in the United States (U.S.) seeking to expand their bases of support and influence policy. Numerous mass e-mail campaigns have recently occurred on behalf of Peruvian jaguars, Rocky Mountain gray wolves, emperor penguins, yellow-billed loons, and, notably, the iconic loping polar bears of the north that face possible extinction. It is often the photogenic quality of these campaigns that garners larger numbers of participants—the so-called critter lobby—though guns in parks, threatened wetlands, and carbon emissions also ignite citizen passions. On rare but increasingly familiar occasions, these causes inspire hundreds of thousands of citizens to write to the U.S. federal government about proposed rule changes. Interest group leaders self-report that they see great importance in the public comment process (Furlong, 2004), but a leading administrative law expert reflecting on the Internet-enabled deluge asks: “Should it be the agency’s responsibility to sift through everything that is ‘sent over the transom’?” (Lubbers, 2006, p. 230).

Little empirical research has been conducted to examine the impact these campaigns actually have on the regulatory rulemaking process. Notice and comment rulemaking under the Administrative Procedure Act (APA) of 1946 uses public participation to architect “democratic safeguards” (Golden, 1998, p. 246) inside a largely technocratic, expert-driven policy process. One rulemaking scholar finds “strong evidence that interest group comments influence the bureaucratic rules issued by executive department agencies” (Yackee, 2005, p. 114). This article looks at the practical and policy impact of mass e-mail campaigns. It focuses theoretical and empirical attention on the competing—and yes, perverse—incentives for large-scale citizen input to the regulatory rulemaking process. It is akin to perverse satisfaction, I argue, to cathartically exercise a right while inadvertently destroying it.

In what follows, I introduce the theory of perverse incentives in the context of interest group-initiated mass e-mail campaigns about U.S. regulatory policy. Stated bluntly, the logic of collection action many scholars my age and older grew up with is dead. The Internet killed it. To make the case, a large, uniquely Internet-based sample¹ of public comments from a prominent 2004 rulemaking is presented as an example of emergent techniques in computational social science. Advanced information retrieval tools were applied to extract 1,000 of the longest modified form letters from a single comment campaign. Based on the theory of perverse incentives and the evidence presented here, a case can be made against mass e-mails, citing

¹ Stuart Shulman, 2008-12-29, "Replication data for: Perverse Incentives," hdl:1902.1/12211 Stuart Shulman [Distributor].

overwhelming evidence of low-quality, redundant, and generally insubstantial commenting by the public.

Admittedly, these large-volume comment cases are exceptional. The vast majority of opportunities for public comment to U.S. federal agencies garner only modest citizen input (Kerwin, 2003; Lubbers, 2006), whether in electronic or paper form. Yet, the growing use of the Internet to collect and encourage commenting signals a need to examine how public comments are generated, submitted, received, and incorporated into rulemaking. There are signs of large-scale, continuous e-mobilizations able to generate uninterrupted streams of e-mail messages directed at diverse agency personnel. One distinguished scholar points to rational choice theory, in describing public comment as “a fire alarm that alerts politicians to agency actions” (West, 2005, p. 662). An interesting question follows: Will this emergent form of grassroots, democratic, fire alarm activism have a substantial impact on the policy process before it is neutralized, superseded, or transformed by norms, rules, or new tools? Further, does it now or will it ever result in the policy efficacy that groups and their members seek?

One way U.S. advocacy groups are e-mobilizing is through “Action Alert Center” Web pages.² These sites are usually linked to the “Tell-a-Friend” and “Donate” pages, both of which enable the continued spiral of mobilization efforts. Alert centers often carry a wide range of issue-oriented campaigns simultaneously.³ The Internet-enabled Web-hosted tools that generate and manage these citizen comments are sold (not inexpensively) in the advocacy and lobbying marketplace and shared widely in the open source domain.⁴

For better or worse, electronic clicking through Action Alert Centers to participate in form letter campaigns is one of the principal contributions of online policy deliberation in the U.S. Including the e-mail generated to members of Congress, tens of millions of U.S. citizens engage the policy process yearly via this mechanism, despite a historical “deep ambivalence

² The Natural Resources Defense Council (NRDC) has its “Biogems” site, for example, that seeks to “mobilize concerned individuals in defense of exceptional and imperiled ecosystems” and it claims its members “number more than 550,000 and have sent more than 7 million messages to corporations and government officials calling for wildland protections.” See: <http://www.savebiogems.org/about/>.

³ For example, see the Defenders of Wildlife “Wildlife Action Center,” which features several such campaigns at: http://action.defenders.org/site/PageServer?pagename=act_homepage.

⁴ See http://www.convio.com/site/PageServer?pagename=prod_advocacy for an example of the high end commercial version and <http://organizersdb.org/> for an example of the free option.

about citizens directly participating in their government” (Roberts, 2004, p. 315). As a form of public participation in policymaking, the virtues and failings of mass e-mail campaigns remain a complicated puzzle. The actual policy impact is under-researched. Considerable anecdotal accounts from agency personnel about the low quality of public comments, as well as their nuisance factor, must be balanced by recognition of the prerogatives of interest groups to inform, inspire, and activate their busy members. The role of public input in U.S. regulatory policy has always been tenuous, variously described as critical to the process or entirely for show. Mass e-mail campaigns represent a new chapter in a continuing debate over the proper way for government to respond to the voice of the people while making public policy.

* If you have trouble viewing links or images, please visit <http://www.environmentaldefense.org/go/eUpdate>

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[TAKE ACTION](#)

Figure 1: Excerpts of two HTML-laden e-advocacy interest group e-mails

Identifying e-Advocacy Campaign Incentives

Public comment campaigns are a salient part of the digital democracy landscape. Yet, the question remains: Do current online campaigns simply exist as a service to citizens who want to participate more regularly in their democracy, or do advocacy organizations have other motives? To answer this question, it is useful to explore the process by which this e-advocacy takes place. The standard interest group “ask” for participation is now familiar. A citizen receives a call for action similar to those shown in Figure 1 and clicks the “TAKE ACTION” button to do her part helping to amplify a particular point of view. She is led immediately to a Web page containing a pre-written, yet editable, e-mail where she can, in one mouse click, send a public comment to a range of policymakers.

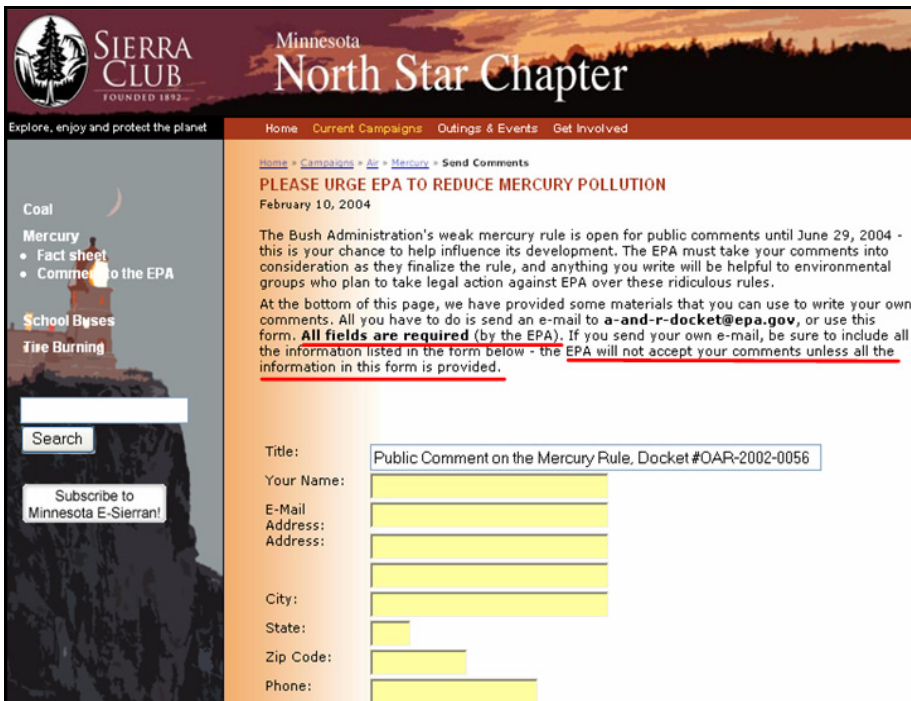


Figure 2: Screen capture of Web site misleading users about requirements (*emphasis added*)

As shown in Figure 2, advocacy Web pages can be misleading. In 2004, for example, a branch of the Sierra Club posted a call for action about mercury pollution that twice explicitly states that the Environmental Protection Agency (EPA) *requires* the completion of various personal information fields in order to accept a submission. In reality, the EPA is well known (for many good reasons) as an agency that considers anonymous comments. The appearance, therefore, can be that the public comment exercise is just an efficient front-end for a more serious back-end data mining operation geared toward membership and donation campaigns. The ubiquitous “Donate Now” and “Tell a Friend” applications built directly into the architecture of online advocacy Web sites reinforce this point, as do the claims on the vendor Web sites.⁵

Constant interest group pleas to “forward to a friend” may be misleading citizens into thinking the *quantity* of public comments about a proposed rule matters above all else. In fact, it is disingenuous to suggest volume matters when the decision-making venue is administrative rulemaking in the U.S. Users of such Web sites are encouraged to believe that the volume of comments sends a “we are watching you” message to rule writers. In fact, the message received by agency personnel and reported repeatedly via interviews and focus groups over a five-year period is that the public is blithely inclined to annoy government officials with a mind-numbing, redundant task that impedes real work.

The political, organizational, and informational imperatives driving these campaigns fit neatly under the mobilization umbrella (Shulman, 2006). There are competing incentives for groups to unleash mass e-mails, ranging from awareness-building and applying political pressure in Congress, to the raising of funds for other important group operations, such as research and litigation that might impact the final rule. A core interest group function is education of its members. The member education delivered by mass e-mail campaigns, however, is generally superficial, often pushing citizens headlong toward adversarial thinking (Shulman, Thrane, & Shelley, 2005).

Most advocacy organizations I have studied and their e-comment vendors do not devote resources or effort toward public education about how to achieve high-impact commenting. Privately, some advocacy group personnel mention concerns about regular member capacities or the rank and file’s willingness to spend more than 30 seconds constructing a comment. Nonetheless, when taking part in these Web-based campaigns, citizens routinely learn the mantra that “adding their own words” will “make it more

⁵ See <http://www.convio.com/our-products/products/convio-email-marketing.html> where Convio makes this explicit in their marketing materials.

meaningful,” but they rarely receive detailed guidance about what kinds of words will have that effect.⁶ This article asserts that the drivers of group growth, income generation, member education, and perceived political recognition are perverse incentives if they inadvertently undermine the democratic safety net embodied in the electronic voice of the public. Since many federal officials privately view the medium of e-mail itself as synonymous with unhelpful input, this is arguably already underway and in some cases firmly rooted in new bureaucratic routines. For some observers, including one serving in the Obama White House, we are now well advanced into a state of permanent e-mobilization cleverly referred to more than five years ago as “notice and spam” (Noveck, 2004).

From the advocacy group point of view, this particular form of click-through democracy is about the comment throughput, increased visibility, membership, and organization-sustaining donations.⁷ Funds to operate in close proximity to Washington’s lobbying ground zero (K-Street), or even to create an image that one is *not* a Washington insider,⁸ are in part eked out of a finite pool of e-activists’ disposable income, where groups compete for Pay Pal-delivered activist dollars. Campaigns run using the “Action Alert” model attempt to cash in on Metcalf’s Law, which posits that the value of a network increases proportionally to the number of subscribers.

In many cases, this approach has worked well. The vendors who sell the services cite specific groups’ “membership growth” and “donations raised” as proof that their product delivers. There are many fewer claims about “policies changed” as a result of such campaigns; however, groups like the Center for Biological Diversity will alert their members to recent victories attributing them to member mail. The big-name advocacy groups such as the Sierra Club, Natural Resources Defense Council, and World Wildlife Federation, stake their reputation, in part, on membership size. It is now standard interest group operating procedure to use Web-based referral

⁶ It is probably too much to expect a full lesson in preparing meaningful public comments on advocacy Web sites. Nonetheless, it is appropriate to expect a simple user guide prioritizing the generation of thoughtful, civil comments over invective-laden tirades.

⁷ In a focus group, a member of a national wildlife organization noted the split between the policy and grassroots staff members. Grassroots organizers see the e-mail campaign tools as a low-cost, high-return method to retain and attract members. Policy specialists, who prepare the group’s longer scientific and legal briefs for the agency, see little value added in the rulemaking process when duplicative, non-substantive comments come from the membership. When policy specialists ask the grassroots organizers to encourage the members to write better comments, there is considerable tension.

⁸ See the Center for Biological Diversity at <http://www.biologicaldiversity.org/>.

systems, listservs, flash animation, and a host of established constituent and customer management Web services. These toolkits help grow and inform the grassroots on the back of public comment campaigns, and they appear useful both for established and up-and-coming groups. Perception management about the role of the group is a central public relations goal in these campaigns.

Limited research exists examining the influence of electronic public comments or that empirically analyzes how such comments ultimately are incorporated into rules. The literature focusing on electronic grassroots democracy is sparse, rarely empirical, and scattered around the relevant disciplinary and interdisciplinary publication outlets. Studies of e-grassroots efforts fit under the broad headings of e-deliberation and online democracy scholarship (Froomkin, 2003; Shulman, 2003; Shane, 2004; Stanley et al., 2004). There have been several efforts to examine whether Internet-enhanced public participation might result in better rules (Carlitz & Gunn, 2002; Froomkin, 2004; Noveck, 2004; Parker, 2006; Shulman et al., 2003) or in a more democratic process characterized by informed deliberation (Beierle, 2003; Bimber, 2003; Brandon & Carlitz, 2002).

Some scholars have tried to answer whether the Internet “changes everything” (Johnson, 1998; Thomas & Streib, 2003) or simply digitizes pre-existing paper-based processes (Coglianese, 2004; Lubbers, 2006). One view suggests the costs in fact outweigh any benefits, potential or realized, as a result of the federal government’s current eRulemaking Initiative (Benjamin, 2006), which created a central portal⁹ for posting all federal rules and receiving electronic comments. Under the Obama administration, opportunities for electronic comment about public policy will almost certainly multiply, but it remains unclear how such changes will produce tangible procedural improvements or better civic engagement.

Political science devotes considerable attention to the role of pressure groups in the political system (e.g., Golden, 1998; Kerwin, 2003; Truman, 1972; Wilson, 1989). Literature analyzing how these groups influence decision-making should be considered when examining the rulemaking process, but much of this work has failed to focus on the exigencies of an increasingly digital communications era. The dominant scholarly model of lobbying, for example, has been focused on resource exchange in an analog world (de Figueiredo & de Figueiredo, 2002). Dating to the 1960s, the work of Milbrath (1963) and others sought to explain interest group lobbying activities as essentially the provision of information or financial support in exchange for access and influence (also see Furlong,

⁹ <http://www.regulations.gov>.

2004; Hanson, 1991; Kingdon, 1984; Wright, 1996). Nuanced theories and formal models emerged in light of inconsistent performance of the resource exchange model (Baumgartner & Leech, 1996; Gordon & Hafer, 2005; Hall & Deardorf, 2006). Classic models of lobbying nonetheless failed to account fully for certain peculiarities of the lobby system, such as the rise of “astroturf lobbying, a term coined by Lloyd Bensten, long-time senator from Texas, to describe artificial grassroots campaigns created by public relations (PR) firms” (Lyon & Maxwell, 2004, p. 563).

Researchers have used a variety of systematic interviews, focus groups, surveys, and raw and coded reporting data required under the Lobbying Disclosure Act (LDA) of 1995 to shed light on the venue, target, and communication medium selection practices of lobbyists (Hojnacki & Kimball, 1999; Holyoke, 2003). One such study uses LDA reporting data to show “the extent of business predominance in the group system is greater than previously reported” (Baumgartner & Leech, 2001, p. 1195), perhaps explaining in part the apparent widespread cynicism among e-mail commenters about the fate of their input (Shulman, 2006).

Some studies of interest group lobbying carry forward out-of-date assumptions found in much of the canonical lobbying literature (e.g., grassroots lobbying is costly and time-consuming, subject to unavoidable free-rider problems when the benefits are widely dispersed). These assumptions reflect a pre-Internet landscape. The collective action thesis (Olson, 1965) cogently captured the increased difficulty of organizing members as the group size grew larger. Olson’s truism, however, is being updated in ways that fail to recognize that the old constraints on collective action are less of a factor (Esteban & Ray, 2001). If Olson’s logic of collective action is a less viable theory, the rising role of electronic grassroots lobbying may prove to be one of the key reasons (Lev-On & Hardin, 2007; Davis, Elin, & Reeher, 2002). Twenty-first century studies of interest groups must start with the assumption of reduced organizing costs and shifting incentives as opportunities for laptop and hand-held participation multiply.

The Landscape of Mass E-mail Campaigns in Rulemaking

As advocacy organizations have become increasingly Web-savvy with their lobbying and outreach, a sufficient number of cases have emerged to begin to discern general attributes about the form of individual and collective action they represent. For instance, Figure 3 shows the volume of e-mails per day over time directed at decision-makers in four high-volume regulatory

actions.¹⁰ Traditional “notice and comment” rulemaking under the APA produces a sharp uptick in comments in the final days of a typical 90-day comment period. E-mail campaigns, on the other hand, produce multiple spikes, presumably as groups send and re-send Action Alerts to members asking them to visit the comment site and to direct others there as well.

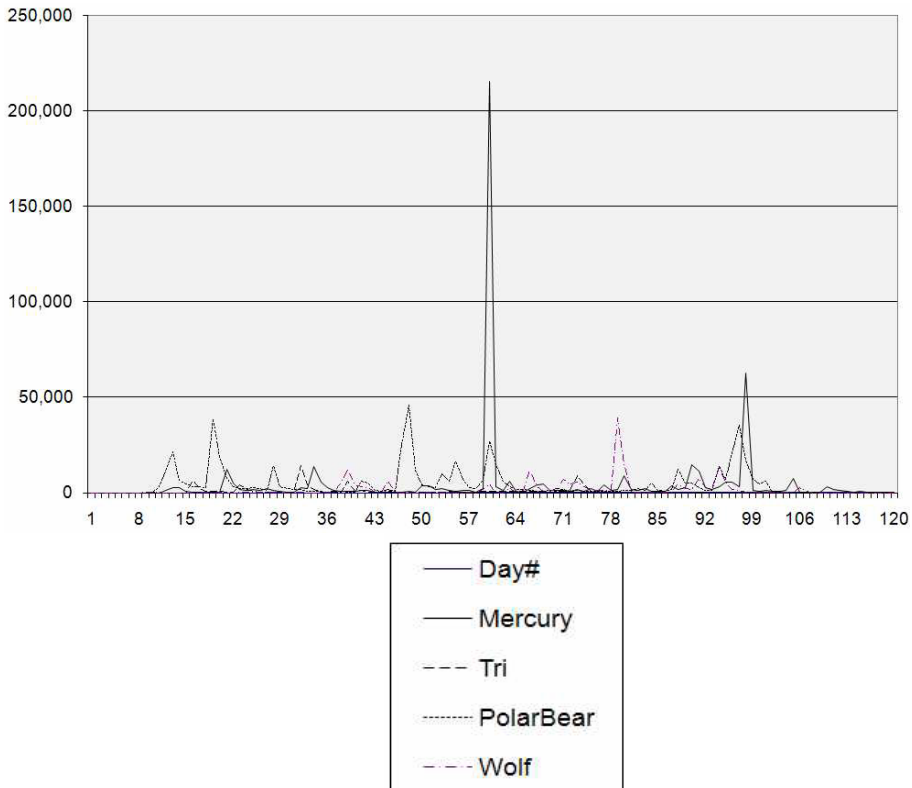


Figure 3: Total number of e-mails per day over four public comment periods

¹⁰ The four cases are: EPA’s mercury and Toxic Release Inventory (TRI) rules, and the Endangered Species Act listing/de-listing decisions by the U.S. Fish & Wildlife Service on the Polar Bear and Grey Wolves respectively. The data were a convenience sample selected based on their availability. The author has collected approximately 25 public datasets from federal agency collaborators comprising in excess of two million public comments. These four were among the largest and most recent at the time of the study. While these data are not representative of electronic public comment writ large, they do capture important trends seen across instances mass e-mail campaigns. All of the datasets are available from the author for research purposes.

Another trend in e-mail campaigns is the unmitigated slide toward plebiscite-style participation. The administrative rulemaking process, at least on paper, has nothing to do with majority rule. In rulemaking, statutes guide agency experts and administrative law traditions making it clear that the simple accumulation of mass sentiment via postcards and petitions or in e-mails should not be a factor in making a decision. Five years of focus group and interview data involving in excess of 200 federal agency personnel confirm that the volume of comments alone carries little or no actual weight in making a regulatory determination. Instead, the public comment process is intended to elicit new information and identify issues not already raised, whether by internal agency processes or via previous public input opportunities. In short, it is the merit of the comment itself and its unique qualities, rather than its frequency of pros or cons, that is valued by regulators, administrative law scholars, and the courts.

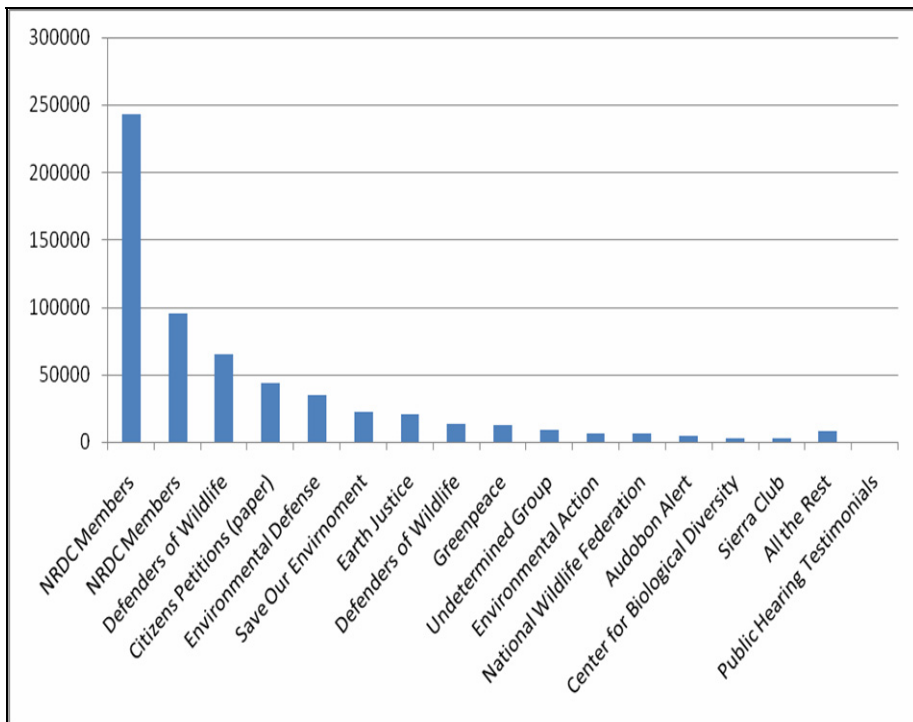


Figure 4: Largest e-mail campaigns in the polar bear listing

Each of the four comment datasets is consistent with the notion that some groups and many individuals are embracing a plebiscitary notion of the comment process. On the group level, operations like the NRDC’s “Biogems” have used a combination of multiple campaigns on a single decision, along with Web services that allow members to submit multiple comments using the same e-mail address and an identical campaign form letter. The result in the case of the polar bear e-mails is that NRDC commenters accounted for the two largest clusters of comments (338,300 comments, or about 62% of the total). By contrast, the second-largest group, Defenders of Wildlife, had it built into their contract for advocacy services that each member could only submit a single comment.

Individual members of some groups appear to be embracing the idea that their clicks that send comments are akin to votes. In each of these four e-mail collections, there are large numbers of “Plebers,” a new term coined here to describe commenters who are contributing to the plebiscitary notion of electronic rulemaking by sending two or more e-mails. In the case of the 338,300 NRDC e-mails, there were only 310,462 unique e-mail addresses. A regular contingent of Plebers is present in each campaign. These commenters submit two, three, four, or more comments, often duplicating their own input as well as that of others.

Table 1. The Pleber Effect: Number of Comments and E-mail Addresses Responsible

Mercury E-mails	E-mail Addresses	Polar Bear E-mails	E-mail Addresses	TRI E-mails	E-mail Addresses	Wolf E-mails	E-mail Addresses
1	244,096	1	261,371	1	63,031	1	144,629
2	87,019	2	80,592	2	7,238	2	18,014
3	20,234	3	24,604	3	746	3	3,926
4	5,316	4	6,782	4	89	4	708
5	2,435	5	2,607	5	25	5	145
6	1,382	6	997	6	4	6	48
7	620	7	316	7	6	7	10
8	366	8	92	10	1	8	6
9	232	9	25	12	1	9	2
10	148	10	6	107	1	10	1

Table 1 (which shows only the first 10 rows of the available data) indicates that in two of the four cases presented here (mercury and polar bears), Plebers accounted for just over half of the total number of e-mails received (approximately 54% and 52%, respectively). In the other two cases, Pleber e-mail addresses were responsible for approximately 26% of the total

e-mail volume. Not shown in Table 1 are three of the four Super-Plebers who submitted more than 100 comments from a single e-mail address. The top two submitters in the mercury case, for example, accounted for 261 and 314 e-mail comments, respectively.

Finally, a very large percentage of commenters are submitting only unmodified form letters. In each of the four cases, greater than 50% of the comments are in groups of six or more exact duplicates. In the case of the wolf comments fully 70% of the e-mails were in groups of six or more exact duplicates, and in the polar bear case it was 81%. For those who fear that e-democracy means the rise of the Plebers, these data suggest the era of the one-click, un-reflexive public comment period is well underway.

Research Questions and Specific Hypotheses

The goal of this paper is to break off a manageable but substantial sample of public comment e-mails and subject them to content analysis. One specific research question is: Do mass e-mail campaigns generate new information for rule writers? Previous pilot study research on a random sample of 1,000 e-mails from the mercury dataset (Shulman, 2006) found that when commenters did modify a form letter in an e-mail campaign the results were often a predictable collection of complaints, concerns, and rants focused on a finite number of dimensions. Substantive and detailed e-mails were extremely difficult to find. The original pilot study also looked specifically for indicators of deliberative democratic activity, for example, that commenters had considered other points of view. This code was dropped early in the annotation process because it was never applied.

Based on the results of the pilot study and the comments of rule-makers in interviews and focus groups (Shulman, 2004, 2006), a hypothesis was formed that additions to form letters sent via e-mail were unlikely to add new, substantive information. Agency personnel have indicated that when pressed for time, they turn their attention first to the longer e-mails, suspecting they may be more likely to include useful information than the shorter e-mails. Hence, reflecting this commonplace heuristic expressed by personnel in the field faced with what often feel like insurmountable piles of citizen e-mail, we selected e-mails in our sample that were the longest modified form letters in a specific campaign.

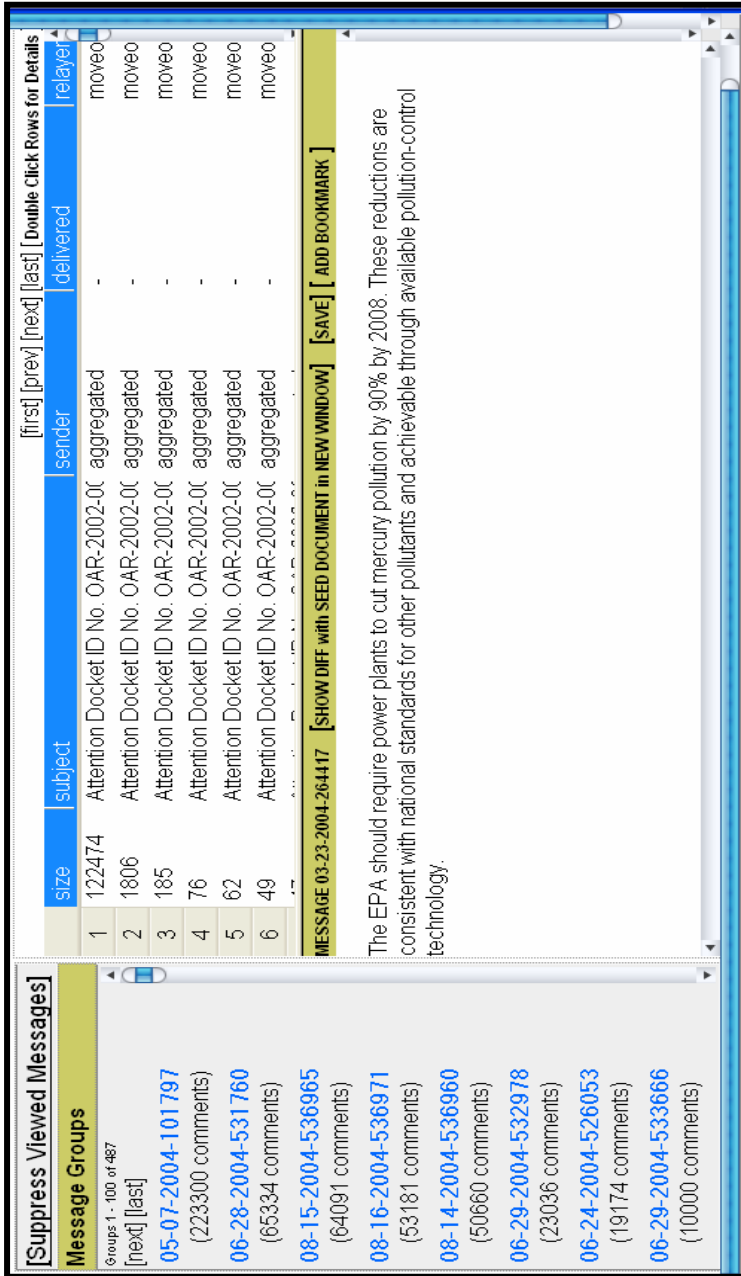


Figure 5: The DURIAN Interface: Message Groups, Sub-Groups and Viewer

Methods

Data Collection

For this project, we started with the full corpus of e-mail provided by the EPA from the 2004 mercury rulemaking (USEPA-OAR-2002-0056), consisting of 536,967 individual text files.¹¹ Using a duplicate and near-duplicate detection interface that sorts and ranks e-mails into clusters according to the size of the campaign that generated them (see DURIAN, Figure 5), we identified 223,300 e-mails in the largest cluster (see left pane in Figure 5 below).¹² In this cluster, the tool identified 122,474 comments (row 1, top right pane) as exact duplicates of the two-sentence MoveOn.org (MoveOn) form letter shown in the bottom right text viewer pane of Figure 5.

Exact duplicates (or “dupes,” in the DURIAN lexicon) exhibit variation only in the date submitted, e-mail address, and signature, except in those not altogether infrequent cases where people sent exact duplicates, triplicates, quadruplicates, and so on of the same comment. The important point here is that in dupes the body of the comment is identical in each instance.

The DURIAN tool also creates sub-groups of aggregated modified form letters (or “near dupes”) as well as the full list of unique near dupes. For example, within the MoveOn cluster, the second largest sub-group after the exact dupes was comprised of 1,806 aggregated instances of commenters re-typing or pasting the MoveOn form letter into the field where they could add their own comments. While hardly novel insofar as the public input goes, in this instance these functionally identical comments are in fact all treated by DURIAN as near dupes of the original two-sentence MoveOn form letter.¹³

¹¹ The data is available from the author for replication and research purposes. A larger collection of datasets is available at: <http://erulemaking.cs.cmu.edu/data.php>.

¹² Thanks go to Jamie Callan (Carnegie Mellon University), the person most responsible for the existence of the DURIAN tool, and his Ph.D. student Hui “Grace” Yang, as well as programmers Mark Hoy and Nancy Steadle. For more detailed scientific papers on human language tools and rulemaking see Yang, Callan & Shulman (2006) and Kwon, Hoy, & Shulman (2006).

¹³ Navigating the landscape of public comment using DURIAN can be fascinating and revealing exercise. For example, in the fourth largest MoveOn sub-group, 72 unique e-mail addresses were responsible for 76 comments in which each commenter had added “Please protect our children” or a very close variant. Such is the way our natural language habits, culture, and politics combine to motivate random MoveOn members to independently write the exact same phrase into a field on an e-advocacy Web site.

We then extracted all 100,828 of the near dupes, giving us all the modified MoveOn form letters. The DURIAN tool tags and highlights what is presumed to be the “unique text” (added by the commenter) in each document, making it possible to more easily see (and extract) the commenter additions (see Figure 6), but also to measure the amount of unique text in each comment. A final sample was drawn from modified MoveOn.org form letters, consisting of just the unique text from the 1,000 longest modified MoveOn form letters.¹⁴

Qualitative Data Analysis Program: Initial Coding

The manual annotation was conducted by teams of coders supervised by the author at the Qualitative Data Analysis Program (QDAP) lab¹⁵ using the software application ATLAS.ti. The ATLAS.ti software enables text span annotation at the sub-document level and the tagging of unlimited attributes at the document level. The benefits of using ATLAS.ti are significant. It allows for scalable, replicable, transparent, multi-coder passes over substantial quantities of text, with significant opportunities for collaborative learning.

The analysis of qualitative data began with an iterative process of reading, coding, comparing, reading again, and then refining the coding. Once the preliminary coding scheme was established, a codebook was prepared with definitions and examples of inclusions and exclusions from particular code categories. A 20-document sample data set was prepared for coding Team 1, which consisted of two “Pioneer” coders. These experienced coders initially identified major categories potentially useful for analysis. Team 1 coders identified specific parts of the texts that illustrate and/or contradict the proposed categories. Discussions occurred frequently between the author and the initial set of pioneer coders during this pre-test stage, with the intent being to refine the coding and maximize the reliability of observations between coders. Perhaps most interesting at this stage is the fact that the code “Substantive Comment” was dropped, as it became obvious there were very few, if any, comments that met the most forgiving threshold for this code.

¹⁴ The author wishes to thank to Hui Yang and Mark Hoy of Carnegie Mellon University for their assistance extracting the data and the EPA for providing it.

¹⁵ QDAP (<http://www.qdap.pitt.edu/>) performs manual coding on a range of text and audio-visual projects. The lab specializes in transparent and replicable approaches to coding transcripts collected from interviews and focus groups, as well as larger corpus annotation for social and computer science research.

The continued blatant disregard of scientific study on issues regarding the environment is simply unacceptable.

When this administration entered office in January 2001, one of the first actions was to revert to a 50 ppb limit on the concentration of arsenic in drinking water - in blatant defiance of a National Science Board recommendation. Shortly after this, the US pulled out of the Kyoto agreement limiting carbon dioxide emissions. The reason given in both cases was that it is "too expensive" to provide solutions that protect the environment on these issues. The administration even filed on Sunday News Programs, saying that the US limit in arsenic in drinking was already more stringent than in western Europe - this is false - western European countries use a standard of no more than 10 ppb.

It is simply unacceptable that this administration or any future administration thwarts scientific investigation on issues of the environment. I understand that the results of scientific investigation may be inconvenient to the special interests that put the President in office. Nonetheless, meaningful science is necessary if we are to progress as a culture and as a species within a safe ecosphere. It is even possible that meaningful science can help American industries through the development of new technologies.

Put the science back into environmental policy making and put a stop to the sale of the public health and the well being of our species in the name of corporate profits in the energy, timber and mining industries.

The EPA should require power plants to cut mercury pollution by 90% by 2008. These reductions are consistent with national standards for other pollutants and achievable through available pollution-control technology.

FIGURE 6. Example of DURIAN highlighting unique text in a MoveOn form letter

Thank you for proposing [X] to protect the polar bear as "threatened" under the Endangered Species Act. I believe [X] that this situation needs to be addressed quickly, not only for the sake of the polar bears but also for the future of the environment and humans. As you work towards a final decision on protecting these incredible creatures [X], I would urge you to hold public hearings. Citizens in the lower 48 states and in Alaska have strong feelings about this issue. I'm sure you are already aware of that [X], considering the fact that [X] more than 100,000 Americans from all across the nation wrote in during the "status review" period last year. Those citizens all supported protecting polar bears [X]. Please allow public hearings, in order [X] to provide more opportunities for U.S. citizens [X] to express their opinions during this critical time. We are all aware that global warming has already wreaked havoc with [X] the polar bear's [X] habitat in the Arctic and we want to protect them and address [X] the matter [X] that is causing this catastrophe. Americans are concerned about the future of the polar bear [X], about global warming and about [X] the environment [X]. Please allow us to participate in the process that will help determine the polar bear's fate [X]. All of our futures depend on what we do to address this and similar situations. It's our world, too! Thank you for your time and consideration.

FIGURE 7. DURIAN highlighting unique text in a Polar Bear form letter

I recently learned of the profoundly unpatriotic changes proposed to the [X] Toxins Release Inventory program [X]. What possible justification could there be [X] to [X] reduce [X] the publicly available information on the toxins being [X] released into [X] the environment? Do [X] these companies somehow feel that their bottom line is more important than the health [X] of [X] the people in [X] the communities that allow them [X] to operate? It is our money that keeps these companies in business. Isn't it our right to know what they are doing to the environment?

FIGURE 8. DURIAN highlighting unique text in a TRI form letter

585 Shepard Way Helena, MT 59601 Dear Ed Bangs, Western Gray Wolf Recovery Coordinator, I am writing to you [X] to express a citizen's concern about the possibility of your removing protected status for the gray wolf in the northern Rocky Mountains at this time [X]. The recovery of these wolves is a success story that is still in progress, and turning wolf management over to state agencies seems shockingly counter-productive given that I've read the Wyoming's and Idaho's current management plans call for killing over two-thirds of the Yellowstone and central Idaho populations [X]. This [X] could push the wolves in these populations back to the brink of extinction all over again. If [X] there is one place in this country where wolves should be allowed to flourish, it is in and around Yellowstone -- our nation's oldest park -- and the remote Selway Bitterroot ecosystem in central Idaho. Wolves even contribute to the regional economy; each year, people who come to see wolves contribute millions of dollars to the region's communities. I've read that since wolves were reintroduced to Yellowstone and the central Idaho wilderness in 1995, the balance between plant and animal systems has been re-established. According to scientists, willows and aspen now grow, beavers and riparian bird species thrive, coyotes and bears benefit from food sources provided by wolves. I understand environmentalists think that before any change [X] in [X] their status [X] is considered, plans need to be in place to avoid a tragic crisis for these magnificent American creatures [X]. Please maintain responsible federal protection for this wolf population [X]. Thank you for the opportunity to comment.

FIGURE 9. DURIAN highlighting unique text in a Gray Wolf form letter

Once the codebook was in place (see Appendix A) and coder training protocols were finalized, the full dataset of the 1,000 longest passages of unique text from MoveOn mercury comments was then coded by four new independent coders who met twice with the author, once to discuss the project at the outset and again to review the results of a pre-test on 20 documents. Coding Team 2 did not communicate with one another during the coding process and relied only on the codebook for generic guidance. In each case, the entire form letter addition was coded with one or more of the codes.

Primary Coding and Tests of Inter-Rater Reliability

The QDAP lab avails itself of custom-built, Web-based software that uses plain text ATLAS.ti coding output to generate statistical reliability tables.¹⁶ Fleiss' kappa coefficient is widely considered a suitable standard measure of the degree of agreement existing beyond chance alone across a wide range of annotation efforts when using 2 or more coders.

Table 2. Raw Counts and Kappa Measure of Reliability from Six Two-way Comparisons Based on Coding Team 2 Members' Overlap on 252 of the 1,000 Documents

Code	Raw Low	Raw High	Raw Avg.	Kappa Low	Kappa High	Kappa Avg.
Agency Mission	106	163	134	0.48	0.66	0.58
Catering to Business	95	150	121	0.52	0.64	0.60
Children's Health	170	191	179	0.75	0.82	0.79
Economic Issues	69	106	80	0.45	0.61	0.54
Higher Values	66	113	81	0.44	0.61	0.51
Personal Experience	46	83	65	0.53	0.59	0.56
Public Health	125	223	175	0.30	0.55	0.42
Science	26	49	40	0.56	0.68	0.63
Toxics	83	189	142	0.32	0.61	0.57

¹⁶ See Lu and Shulman (2008) for an introduction to reliability measurement tools and techniques.

The 1,000 longest modified MoveOn comments were divided into separate ATLAS.ti copy bundles. Each of the four members of Coding Team 2 got the same documents for rounds 1 and 2. The author reviewed the reliability after each of the first two rounds and determined it was good enough to proceed, with an overall kappa ≥ 0.6 . In rounds 3 and 4, each of the four coders received a different set of documents, and in Round 5 all four coders received the same documents. Table 1 reports the results from six two-way comparisons of the reliability of the coding when rounds 1, 2, and 5 were merged. It presents the low, high, and average scores based on the comparisons of the work of all four coders on 252 of the 1,000 documents.

A merge was performed incorporating all five rounds of coding to arrive at a single set of annotations for the entire sample of the 1,000 longest modifications of the MoveOn.org form letter. Not all of the annotations were used in this final data merge. Instead, some annotations from all four of the coders were merged to achieve a final coded dataset with one set of codes applied to each of the 1,000 documents.

Table 3. Frequency Counts for the Coding of the 1,000 Longest Modified MoveOn.org Comments on the Mercury Rule

Code	Frequency
Agency Mission	539
Catering to Business	556
Children's Health	778
Economic Issues	365
Higher Values	314
Personal Experience	202
Public Health	719
Science	213
Toxics	621
Total	4307

A few initial descriptive comments about the frequency counts are salient here. First, the numbers themselves are blunt instruments for understanding the landscape of the qualitative data. More useful inferences result from a careful manual review of the quotations themselves. Still, the raw counts do tell us a few things about how the MoveOn portion of the public modifies their form letters:

- The most frequent codes (**Public Health** and **Children’s Health**) together constituted about 35% of the 4,307 observations. This is relatively unsurprising when one considers the function of the EPA is in large part to protect human health and the environment from harm, and the Web advocacy sites used alarming images about health threats to inspire commenters.
- Two of the least frequent codes (**Economic Issues** and **Science**) together constituted a little more than 13% of the observations.
- **Toxics** (14%), **Catering to Business** (13%), and **Agency Mission** (13%) together accounted for 40% of the observations.

An agency like the EPA is required under the law to seek useful scientific and economic data, but is not required to look to the notice and comment process for direction regarding its core mission or stakeholder feelings. Congress and the courts are responsible for setting priorities and limits on what the EPA must do as an agency. Nonetheless, MoveOn commenters in this case were much more likely to modify their form letters with the types of comments regulators least need to hear, while they were much less likely to focus on core economic or scientific issues that are the statute-mandated basis for a decision. When invoking science or economics, MoveOn members were able to do so in only a trivial manner.

Closely reading the MoveOn additions, one cannot help but infer that this particular slice of commenters expected little or nothing from an EPA with Bush administration political appointees at the helm. Indeed, the prevalence of comments directly or indirectly telling the EPA to “do its job” was one striking feature of this dataset (also see Schlosberg, Zavestoski, & Shulman, 2007).

Secondary Coding: Searching for New Information

For each of the major code categories a new dataset was generated consisting of all of the comments assigned to that code. Using this approach, a single comment would appear in multiple new datasets if it were coded with more than one attribute in the first round of coding. In fact, this method

resulted in the generation of 4,313 code-able units. An experienced coding pair was instructed to review each of the 4,313 items looking for “new information” generated by the commenter and potentially useful for the rule writers. These two coders were instructed to cast a wide net for any additions that might conceivably cross the new information threshold. The results were stark. With a remarkable degree of reliability (see the average 0.97 kappa in Table 4) the secondary coding indicated the vast majority of comments in this sample added no new information.

Table 4. New Information Coding: Raw Counts, Matches and Kappa Scores

Code	No – Raw Counts & Match	No (K)	Yes – Raw Counts & Match	Yes (K)
Agency Mission	529, 529, 522	0.97	10, 10, 3	0.18
Anecdote	199, 198, 188	0.94	3, 13, 2	0.14
Catering	548, 549, 543	0.98	8, 7, 2	0.15
Children's Health	765, 733, 730	0.95	13, 45, 10	0.21
Economic Issues	364, 358, 357	0.98	1, 7, 0	0.00
Higher Values	310, 309, 307	0.98	4, 5, 2	0.29
Public Health	712, 697, 696	0.98	7, 22, 6	0.26
Science	204, 197, 196	0.96	9, 16, 8	0.47
Toxics	614, 585, 583	0.95	7, 36, 5	0.13
Average		0.97		0.20

While it was easy for the coders to score reliably the lack of substance in these MoveOn comments, the inverse was true for finding those comments that might in fact be adding new information. The low kappa (average 0.20) and extremely low raw numbers are indicative of a dataset in which it is very difficult to find new information amongst the comment additions. Adjudication by the author of the items scored “yes” invalidated approximately 46% of the items. Hence, after adjudication, fewer than 5% of the 1,000 longest modified MoveOn form letters added potentially new information.

Conclusion

The findings in this sample suggest very few modified MoveOn form letters contain new information. The actual population of modified form letters just from the MoveOn campaign was 100,828. The total number of e-mails received by the EPA was over a half million, from at least 28 distinct electronic campaigns. The vast number of duplicative comments collected for this one rule suggests that Action Alert centers have succeeded in reaching citizens and in encouraging them to “take action,” but this success is superficial. Analysts in the EPA in 2004 did not have the benefit of tools like DURIAN or any other electronic sorting mechanisms. They did not have the luxury of working with a sample, as we did here. Indeed all of the comments, dupes and non-dupes alike, were printed on paper (the legal record at EPA) and reportedly sorted by the shape of the words on the page by a team of 15 staffers making piles. When distinctive comments were discovered, they were scanned in for inclusion as a PDF in the EPA’s E-Docket system.

Although this article examines more closely only one campaign in a single instance of regulatory rulemaking, pilot studies (Shulman, 2004 & 2006) have found similar results. Broadly similar quantitative and qualitative patterns are emergent across the wider set of public comments collected and sampled to date. Research currently underway expands the scope of study to more than a dozen rulemakings to test the general properties of the findings in this case.

The dawn of electronic democracy initially was hailed by some as a promising time. A perception emerged that digital or Internet-enhanced democracy was going to be characterized by an open, transparent, information-rich public sphere. It was tantalizing for researchers and democratic theorists alike to speculate on the promise of moving public participation online and engaging the better nature and wisdom of citizens. In practice, the perverse incentives driving the generation of mass e-mail campaigns have had the effect of piling insubstantial comments containing very little new information on the desks of agency officials working with significant time and resource constraints. Indeed, instead of proving how passionate the citizenry was about the mercury changes, or signaling to rulemakers that hundreds of thousands of citizens were following the rulemaking debate, the piles of non-substantive, non-deliberative, and unoriginal emails left EPA staff wondering how much people truly cared.

Interest groups are inadvertently making it harder for the very few substantial comments sent via e-mail to be identified amongst the hundreds of thousands of comments with no new information. In the mercury

rulemaking, the results were a final rule that all the environmental groups were deeply troubled by and a public comment dataset that left agency official nonplussed about receiving future e-mails. Although some may point to the effectiveness of the Action Alert campaigns in cultivating group membership as a benefit to their existence, the piggybacking of their business model on government processes is questionable. The resulting disengagement of the citizenry and the potential citizen misperceptions about the effectiveness of mass comment campaigns may outweigh the organizational benefits.

While the limited policy impact of these communications is clear, the long-term political impact of these campaigns is more difficult to assess. At least three possible pathways are imaginable for the immediate future. First, a norm may emerge that e-mail campaigns are a nuisance rarely worthy of careful consideration. To some extent, this is happening already. This in turn may result in a second generation of e-advocacy Web sites that prompt commenters to write better comments and to engage in more deliberative behavior. Second, formal rules may emerge within and across agencies with guidance from the Office of Management and Budget, or via a new law that will change the way these comments are received and processed. Already many agencies are shutting down e-mail as an avenue for public comment and forcing commenters onto the Regulations.gov Web form. A third possibility is that these campaigns accelerate and the agencies come to rely on DURIAN-like information retrieval and natural language processing tools as the only possible means to manage the comment flow as it increases. In this case, the predictions by Emory and Emory (2005) of a “technological arms race” in public comment may be realized much to the detriment of the public role in rulemaking. Ultimately, notice and comment rulemaking is about generating new information relevant to the decision at hand. Until the interest groups can find a way to tap more effectively into the collective wisdom of their members, perverse incentives will cloud the case for public participation via e-mail.

Appendix A

Codebook Used by Coding Team 2

Agency Mission

Telling the EPA, or other government officials more generally, what the duties or responsibilities of the EPA are (or ought to be), for example, as regulators, scientists, lawyers, or else as elected or appointed officials. Exclusions: general comments about the role of government to protect the public interest (please use a separate code for that).

Catering to Business

Comments that accuse the government or agency of undue deference to the concerns of business.

Children's Health

Comments about the consequences for children's health including references to unborn fetuses.

Economic Issues

Comments about the direct (or indirect) economic impact of regulation (or the absence of regulation).

Higher Values

Comments about purported higher spiritual, environmental, ecological, religious, or other values that should be considered when making a decision.

Personal Experience

Comments that include brief anecdotes or stories, usually told as a first-hand personal experience, or else as something a commenter heard about in the press, from a friend or co-worker, or from an interest group.

Public Interest or Health

Comments expressing concerns about public health or the general public interest, but not specified as Children's Health (this may co-occur regularly with Children's Health).

Science

Comments that reference specific scientific findings or studies, or that make references to scientific thinking more generally.

Toxics

Comments about hazardous toxic substances in the environment, which include 'poison' and its synonyms. Please exclude generic references to pollution. Definition of toxic: of, relating to, or caused by, a toxin or other poison, or capable of causing injury or death, especially by chemical means; poisonous.

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