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Responding to Mass, Computer-Generated, and Malattributed Comments

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RECENT DEVELOPMENTS

RESPONDING TO MASS, COMPUTER-GENERATED, AND MALATTRIBUTED COMMENTS

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INTRODUCTION

A number of technological and political forces have transformed the once staid and insider dominated notice-and-comment process into a forum for large scale, sometimes messy, participation in regulatory decisionmaking. It is not unheard of for agencies to receive millions of comments on rulemakings; often these comments are received as part of organized mass comment campaigns.¹ In some rulemakings, questions have been raised about whether public comments were submitted under false names,² or were

1. See Steven J. Balla, Alexander R. Beck, Elizabeth Meehan & Aryamala Prasad, *Lost in the Flood?: Agency Responsiveness to Mass Comment Campaigns in Administrative Rulemaking*, REGUL. & GOVERNANCE, May 2020, at 1 (exploring 1,049 mass comment campaigns occurring during twenty-two Environmental Protection Agency (EPA) rulemakings from 2012 to 2017); Rachel Augustine Potter, *More than Spam?: Lobbying the EPA Through Public Comment Campaigns*, BROOKINGS INST. (Nov. 19, 2017), <https://www.brookings.edu/research/more-than-spam-lobbying-the-epa-through-public-comment-campaigns/>.

2. In this paper, we refer to comments submitted under false names as “malattributed”

automatically generated by computer “bot” programs.³

The Federal Communications Commission’s (FCC’s) “Restoring Internet Freedom” (i.e., net neutrality) rulemaking perhaps best illustrates the new challenges posed to the notice-and-comment process. That proposed rule attracted a record number of public comments: almost twenty-two million by the official close of the comment period, with another three million arriving after the fact.⁴ Although about six percent of the comments were unique, the rest were submitted multiple times, in some cases hundreds of thousands of times.⁵ On nine different occasions, more than seventy-five thousand comments were entered into the docket at the very same second.⁶ The submissions “included comments from stolen email addresses, defunct email accounts and people who unwittingly gave permission for their comments to be posted.”⁷ A consulting firm later determined that about a

comments. In popular usage, the terms “fraudulent” and “fake” are often used to describe these types of comments. Those terms are often used in a way that is overinclusive, however, as comments can contain false information other than the name of the commenter. Since we are here concerned only with comments containing inaccurate names, we will use the more precise term “malattributed” except when quoting a source that uses another term.

3. *Fake It Till They Make It: How Bad Actors Use Astroturfing to Manipulate Regulators, Disenfranchise Consumers, and Subvert the Rulemaking Process: Hearing Before the H. Fin. Servs. Comm.*, 116th Cong. 1–2, 5, 13 (2020) [hereinafter *Fake It Till They Make It*].

4. In 2015, the Federal Communications Commission (FCC) issued its “net neutrality” rule, prohibiting broadband Internet providers from blocking, degrading, or interfering with Internet traffic. *Protecting and Promoting the Open Internet*, 80 Fed. Reg. 19,737, 19,739–40 (June 12, 2015) (codified at 47 C.F.R. pts. 1, 8, 20). The rule was upheld in *United States Telecom Ass’n v. FCC*. U.S. Telecom Ass’n v. FCC, 825 F.3d 674, 689 (D.C. Cir. 2016). In 2017, the FCC proposed repealing the 2015 rule. *Restoring Internet Freedom*, Notice of Proposed Rulemaking, 32 FCC Rcd. 4434 (2017). The Notice of Proposed Rulemaking was released in May and published in the *Federal Register* in June. 82 Fed. Reg. 25,568 (June 2, 2017). The Final Rule was promulgated in early January 2018. *Restoring Internet Freedom*, 83 Fed. Reg. 7852 (Feb. 22, 2018) (codified at 47 C.F.R. pts. 1, 8, 20). For information on the comments, see Paul Hitlin, Kenneth Olmstead & Skye Toor, *Public Comments to the Federal Communications Commission About Net Neutrality Contain Many Inaccuracies and Duplicates*, PEW RES. CTR. 2, 12–13 (Nov. 29, 2017), https://www.pewresearch.org/internet/wp-content/uploads/sites/9/2017/11/PI_2017.11.29_Net-Neutrality-Comments_FINAL.pdf.

5. Hitlin *supra* note 4, at 3 (“Of the 27.1 million comments posted, 6% were unique. The other 94% were submitted multiple times.”).

6. *Id.*

7. James V. Grimaldi & Paul Overburg, *Millions of People Post Comments on Federal Regulations. Many Are Fake.*, WALL ST. J. (Dec. 13, 2017), <https://www.wsj.com/articles/millions-of-people-post-comments-on-federal-regulations-many-are-fake-1513099188>. A video on the newspaper’s website summarizes: “[T]he Wall Street Journal uncovered thousands of comments from fake email addresses, abandoned or defunct email accounts,

third of the comments were sent from temporary or disposable email domains, and about ten million were from senders of multiple comments.⁸ FCC Commissioner Jessica Rosenworcel has stressed that five hundred thousand or so comments came from Russia.⁹ The New York Attorney General concluded that 9.3 million comments were what this Article refers to as “malattributed”—submitted under false identities—including over seven million from a single submitter.¹⁰ In sum, three forms of public participation in this rulemaking raised concerns: 1) the mass occurrence of identical and near duplicate comments, 2) the malattribution of identities, and 3) the apparent automation of comment submission.¹¹

With its new higher profile and an emerging set of technological challenges, the notice-and-comment process has come under increasing scrutiny. In 2019 the U.S. Senate Permanent Subcommittee on Investigations issued a staff report entitled, “Abuses of the Federal Notice-and-Comment Rulemaking Process.”¹² The report identified problems associated with mass, malattributed, and computer-generated comments, including a lack of agency processes and policies aimed at identifying, managing, and addressing such

posted on behalf of unwitting participants. For example, 818,000 identical comments on the FCC site favor repealing the rules. In a random sample of people whose emails were used for those posts, 72% said they had nothing to do with them. Jack Hirsch was one of them. ‘I was horrified. Knowing that this is actually an issue that I cared enough to write my representatives about, and knowing that my information had been falsified to support a completely opposing view, it was really frustrating, and honestly, I felt like there was no recourse.’” *Thousands of Fake Comments on Net Neutrality: A WSJ Investigation*, WALL ST. J. (Dec. 12, 2017, 12:02 PM), <https://www.wsj.com/video/thousands-of-fake-comments-on-netneutrality-a-wsj-investigation/8E52172E-821C-4D89-A2AA-2820F30B8648.html>.

8. *FCC Restoring Internet Freedom Docket 17-108: Comments Analysis*, EMPRATA 2 (Aug. 30, 2017), <https://www.emprata.com/emp2017/wp-content/uploads/2017/08/FCC-Restoring-Internet-Freedom-Comments-Analysis.pdf>.

9. Nicholas Confessore and Jeremy Singer-Vine on Request for Inspection of Records, 33 FCC Rcd. 11808 (adopted Nov. 7, 2018) (statement of Commissioner Jessica Rosenworcel, dissenting).

10. N.Y. STATE OFF. OF THE ATT’Y GEN. LETITIA JAMES, *FAKE COMMENTS: HOW U.S. COMPANIES & PARTISANS HACK DEMOCRACY TO UNDERMINE YOUR VOICE* 6 (2021), <https://ag.ny.gov/sites/default/files/oag-fakecommentsreport.pdf>; see also Letter from Eric Schneiderman, Att’y Gen., N.Y., to Thomas M. Johnson, Jr., Gen. Counsel, FCC (Dec. 13, 2017), https://ag.ny.gov/sites/default/files/ltr_to_fcc_gen_counsel_re_records_request.pdf (noting eight million comments filed under false identities) (encouraging Mr. Thomas Johnson, Jr. to postpone the vote based on the possibility of damage to the FCC’s reputation).

11. See JAMES, *supra* note 10.

12. *Joint Hearing Before the Permanent Subcomm. on Investigations & the Subcomm. on Regul. Affs. & Mgmt. of the Comm. on Homeland Sec. & Governmental Affs.*, 116th Cong. (2019) (Staff Report, Abuses of the Federal Notice-and-Comment Rulemaking Process) [hereinafter *Joint Hearing Subcommittee Report*].

comments.¹³ The Administrative Conference of the United States (ACUS) has also been tracking these issues for several years.¹⁴ This attention is partly because all three of these types of comments can generate serious challenges for agencies, raising a pressing set of questions concerning how best to respond while ensuring the functioning of the informal rulemaking process.¹⁵

In this Article, we examine whether and to what extent such submissions are problematic and make recommendations for how rulemaking agencies should respond as a matter of law, policy, and technology. Our overarching conclusion is that agencies should adopt both low- and high-tech measures to limit the negative impact of these sorts of comments. Mass, malattributed, and computer-generated comments, however, do not represent a crisis for the regulatory state at this time. They have not been found to violate federal law and do not generally undermine the integrity of notice-and-comment rulemaking, and we are not aware of evidence of widespread substantive harms in particular rulemaking efforts or to the rulemaking system overall. However, appropriate responses, especially those that take advantage of new technology, could reduce the cost and negative impacts of technology-enabled comments.

Adopting such techniques could, for example, improve the opportunity for a diverse public to participate in the federal rulemaking process meaningfully and augment current practices with new forms of citizen engagement. Indeed, in addition to exploring how new technologies—the very same technologies that enable mass, malattributed, and computer-generated comments—can help with analyzing those comments, we also explore throughout how technology can help regulatory officials make sense of public input and draw greater insights from public comments of all kinds. Finally, other jurisdictions at the state and local level and internationally are turning to new technology to enable innovative forms of public participation, thus improving the quality of rule and policymaking. These activities illustrate hopeful opportunities for future experimentation.

13. *Id.* at 68–69.

14. See Matthew Wiener, Vice Chairman & Executive Director, Admin. Conf. of the U.S., Introductory Remarks at the Administrative Conference of the United States and Administrative Law Review Symposium: Mass and Fake Comments in Agency Rulemaking 14 (Oct. 5, 2018), <https://www.acus.gov/sites/default/files/documents/10-5-18%20Mas%20and%20Fake%20Comments%20in%20Agency%20Rulemaking%20Transcript.pdf>.

15. Journalistic and popular attention has focused on comments that fall into all three categories simultaneously, i.e., mass computer-generated malattributed comments. But these three distinct characteristics do not necessarily coincide. Each presents distinct practical and normative issues. While this Article examines all three types of comments, it is careful to disaggregate them and take into account the important ways in which they differ. These three types of comments are defined in further detail below.

This Article is based on a report submitted by the authors to the ACUS and is informed by a set of interviews during the summer and fall of 2020 with agency personnel with a background in the rulemaking process at agencies with substantial rulemaking dockets. The interviews, which were not meant to capture the views of a representative or random sample, were with staff of the Environmental Protection Agency (EPA), the Consumer Financial Protection Bureau, the Department of Transportation, and the FCC, as well as with officials from the General Services Administration (GSA) responsible for developing and maintaining the Federal Docket Management System (FDMS). A technical advisory group of experts drawn from government, private industry, and academia also provided feedback to the authors, as did an additional online roundtable of agency officials with experience in the notice-and-comment process.

This Article is divided into seven parts. Part I provides a general introduction to notice-and-comment rulemaking and the role of technology in that process. Part II discusses recent technological developments that have contributed to the growth of mass, malattributed, and computer-generated comments, and describes some of the challenges associated with these types of comments. Parts III, IV, and V focus on each of these comment types in turn. Part VI discusses technological opportunities, with a focus on current, available tools that can be used to facilitate the processing of information from the notice-and-comment process or enhance supplements to the notice-and-comment process. Part VII concludes.

I. TECHNOLOGY AND NOTICE-AND-COMMENT RULEMAKING

During the latter half of the twentieth century, there was considerable growth in the use of informal rulemaking by administrative agencies.¹⁶ A cornerstone of the informal rulemaking process is the opportunity for members of the public to submit comments on rulemaking proposals,¹⁷ which is why it is often referred to as notice-and-comment rulemaking. For decades, organizations and individuals have been able to use this opportunity to help inform the process of regulatory development.¹⁸ Public comments on agency rulemakings take a wide variety of forms that include detailed

16. See Christopher DeMuth, *Can the Administrative State Be Tamed?*, 8 J. LEGAL ANALYSIS 121, 125–27 (2016).

17. Cary Coglianese, *Citizen Participation in Rulemaking: Past, Present, and Future*, 55 DUKE L.J. 943, 945 (2006); see also Beth Simone Noveck, *The Electronic Revolution in Rulemaking*, 53 EMORY L.J. 433, 517 (2004) (“Participation in rulemaking is one of the most fundamental, important, and far-reaching of democratic rights”).

18. Michael A. Livermore, Vladimir Eidelman & Brian Grom, *Computationally Assisted Regulatory Participation*, 93 NOTRE DAME L. REV. 977–78 (2018).

submissions by sophisticated repeat players, short expressions of support or opposition from members of the public, signed form letters in response to solicitations from non-governmental organizations (NGOs), and technical reports from unaffiliated experts.¹⁹

There is considerable variation in the level of public participation from one rulemaking to another. The vast majority of rulemakings are relatively unremarked upon by the public, with—at most—participation by the stakeholders most affected by a rule.²⁰ This level of participation is not surprising given the often highly technical and specialized nature and low visibility of many rulemakings. Although federal agencies publish the opportunity to participate in the *Federal Register* (effectively, the newspaper of the federal government), they often do not advertise rulemakings elsewhere and the public tends to have little knowledge of their ability to engage unless a third party promotes the opportunity. In a small percentage of well-publicized rulemakings with particular public salience—such as those highlighted above—public participation can be orders of magnitude above the norm, with the number of comments ranging from thousands to millions.²¹

The Administrative Procedure Act (APA) sets forth the key elements of notice-and-comment rulemaking in § 553.²² Subject to certain exceptions, agencies first must publish a general notice of the proposed rulemaking in the *Federal Register*.²³ That notice “shall include—

- (1) a statement of the time, place, and nature of public rule making proceedings;
- (2) reference to the legal authority under which the rule is proposed; and

19. See *id.* at 977–78 (stating public participation in the notice-and-comment rulemaking process has increased drastically due to the flexible and simple process).

20. David M. Shafie, *Participation in E-Rulemaking: Interest Groups and the Standard-Setting Process for Hazardous Air Pollutants*, 5 J. INFO. TECH. & POL. 399, 403–405 (2008); see also Stuart Shapiro, *When Do Agencies Change Their Proposed Rules* (Nov. 10, 2007) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1026066 (finding that fewer than 10% of rulemakings received more than 100 comments); John M. de Figueiredo, *E-Rulemaking: Bringing Data to Theory at the Federal Communications Commission*, 55 DUKE L.J. 969 (2006). Other agency actions that are subject to public commenting follow as similar pattern. An analysis focusing on the fifty draft guidance documents published for public comment by the EPA from 2011–2014 found that just eight received more than 5,000 comments, with five exceeding 40,000 comments. Nicholas R. Parrillo, *Should the Public Get to Participate Before Federal Agencies Issue Guidance? An Empirical Study*, 71 ADMIN. L. REV. 57, 97–98 (2019) [hereinafter Parrillo, *Should the Public Get to Participate*]; NICHOLAS R. PARRILLO, FEDERAL AGENCY GUIDANCE: AN INSTITUTIONAL PERSPECTIVE 160 (Oct. 12, 2017) (report to the Admin. Conf. of the U.S.).

21. See *supra* notes 4–10 and accompanying text.

22. 5 U.S.C. § 553.

23. *Id.* § 553(b).

(3) either the terms or substance of the proposed rule or a description of the subjects and issues involved.”²⁴

The APA further provides that “[a]fter notice required by this section, the agency shall give interested persons an opportunity to participate in the rule making through submission of written data, views, or arguments with or without opportunity for oral presentation. After consideration of the relevant matter presented, the agency shall incorporate in the rules adopted a concise general statement of their basis and purpose.”²⁵ “[P]erson” is broadly defined to include “an individual, partnership, corporation, association, or public or private organization other than an agency.”²⁶ Consistent with the broad ideals underlying the commenting process, courts read this provision expansively.²⁷ Courts have also elaborated that the purpose of the notice requirement is to facilitate meaningful comments.²⁸ For example, agencies must disclose in their notice any scientific or technical details on which they base their proposed rules to give the public a fair opportunity to react and comment thereon.²⁹

Agencies not only must provide notice and an opportunity for public comments but also must then “consider[] . . . the relevant matter presented” in those comments.³⁰ The courts have interpreted this language to require that, in the notice of the final rule, agencies respond to “significant” comments—those that, “if true . . . would require a change in [the] proposed rule.”³¹ Failure to so respond is grounds for remand.³² Under § 706(2)(A) of the APA, agency rulemakings will be set aside if they are “arbitrary, capricious, an abuse of discretion, or

24. *Id.*

25. *Id.* § 553(c).

26. *Id.* § 551(2).

27. *E.g.*, *O'Rourke v. U.S. Dep't of Just.*, 684 F. Supp. 716, 718 (D.D.C. 1988) (holding “person” includes non-citizens and collecting cases); *Neal-Cooper Grain Co. v. Kissinger*, 385 F. Supp. 769, 776 (D.D.C. 1974) (holding that a foreign government or instrumentality thereof is a “person”).

28. *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 393 (D.C. Cir. 1976).

29. *Id.*

30. 5 U.S.C. § 553(c).

31. *Am. Mining Cong. v. EPA*, 907 F.2d 1179, 1188 (D.C. Cir. 1990) (citations omitted); *Home Box Off., Inc. v. FCC*, 567 F.2d 9, 35–36 (D.C. Cir. 1977) (per curiam). Without such an obligation, courts have said, the opportunity to comment would be “meaningless.” *Id.* at 35; *see Carlson v. Postal Regul. Comm'n*, 938 F.3d 337, 351 (D.C. Cir. 2019); *Am. Civ. Liberties Union v. FCC*, 823 F.3d 1554, 1581 (D.C. Cir. 1987) (per curiam); *St. James Hosp. v. Heckler*, 760 F.2d 1460, 1470 (7th Cir. 1985).

32. *E.g.*, *La. Fed. Land Bank Ass'n v. Farm Credit Admin.*, 336 F.3d 1075, 1080, 1085 (D.C. Cir. 2003).

otherwise not in accordance with law.”³³ The failure to acknowledge and respond to substantive concerns raised in the rulemaking process is one of the grounds for a court to find that an agency’s rulemaking fails under the arbitrary or capricious standard.³⁴

Although the requirement to respond to comments is serious, it is not absolute. The “APA requirement of agency responsiveness to comments is subject to the common-sense rule that a response [is not always] necessary.”³⁵ Comments that “are purely speculative and do not disclose the factual or policy basis on which they rest require no response.”³⁶

In recognition of the potential for information and communication technologies to facilitate broader participation in the regulatory process, the E-Government Act was signed into law in December 2002.³⁷ Among other things, the George W. Bush Administration established the eRulemaking Program to spearhead the creation of an online system for conducting the notice-and-comment process at agencies throughout the federal government.³⁸ To the extent deemed practicable, each agency must post information required to be published in the *Federal Register* online, maintain online rulemaking dockets, and allow for electronic submission of comments accepted under § 553(c).³⁹ To better facilitate this public online access, Regulations.gov was created in January 2003.⁴⁰ All executive agencies were required to join the eRulemaking Program.⁴¹ As of this writing, many but

33. 5 U.S.C. § 706(2)(A). This is known as the “arbitrary and capricious” standard. An agency rule will be arbitrary and capricious if the rule relies on factors that Congress has not intended it to consider, entirely fails to consider an important aspect of the problem, offers an explanation for its decision in conflict with the evidence before the agency, or is so implausible that it cannot be ascribed to a difference in view or the product of agency expertise. *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 42–47 (1983).

34. *See, e.g.*, *Bus. Roundtable v. SEC*, 647 F.3d 1144, 1152 (D.C. Cir. 2011) (discussing agency failure to address cost issues raised in comments).

35. *Nat. Res. Def. Council, Inc. v. EPA*, 859 F.2d 156, 188 (D.C. Cir. 1988) (per curiam).

36. *Home Box Off., Inc. v. FCC*, 567 F.2d 9, 35 n.58 (D.C. Cir. 1977) (per curiam); *see also Pub. Citizen, Inc. v. FAA*, 988 F.2d 186, 197 (D.C. Cir. 1993).

37. E-Government Act of 2002, Pub. L. No. 107–347, 116 Stat. 2899 (2002) (codified at 44 U.S.C. § 3501).

38. *See id.*

39. *See id.*

40. Regulations.gov was initially managed by the EPA. *See About the eRulemaking Initiative*, REGULATIONS.GOV, <https://www.regulations.gov/about> (last visited Feb. 8, 2022). The General Services Administration (GSA) assumed the role of managing partner of the eRulemaking Program at the beginning of October 2019. *Id.*

41. Cynthia R. Farina, *Achieving the Potential: The Future of Federal E-Rulemaking* (2009), 62 ADMIN. L. REV. 279, 282 (2009).

not all independent agencies also use Regulations.gov for their rulemakings; those that do not prominently include the FCC and the Securities and Exchange Commission (SEC).⁴²

Notice-and-comment rulemaking remains a central mechanism for public participation in agency policymaking.⁴³ The adoption of e-rulemaking by agencies, along with broader associated technological developments, has led to fundamental changes in notice-and-comment rulemaking. What was once a paper process that was difficult to access and generally dominated by a small number of repeat players has become more visible and therefore more accessible. The elimination of barriers to participation has brought with it meaningful change. Much of this is for the better. The move online has increased participation, made for better-informed agencies, made rulemaking more transparent, and provided commenters, stakeholders, and rule writers within the agencies with easier access to materials in the docket. It has also enabled certain forms of commenting that lack obvious benefits and that may do affirmative harm. The remainder of this Article examines these opportunities and challenges.

II. THE NEW WORLD OF TECHNOLOGY-ENABLED COMMENTS

For much of its history, the APA's notice-and-comment process typically involved a particular form of commenting: an individual or entity with "data, views, or arguments" relevant to the draft rule produced a bespoke comment

42. A complete list of participating and nonparticipating agencies appears on the Regulations.gov website, <https://www.regulations.gov/agencies>. See *Agencies, REGULATIONS.GOV*, <https://www.regulations.gov/agencies> (last visited Feb. 8, 2022).

43. Filing comments, electronically or by mail, is not the only way that individuals and organizations may participate in agency rulemaking. Agencies also occasionally hold public hearings, consult with experts in advisory committees, and work with interest group stakeholders in negotiated rulemakings. The Negotiated Rulemaking Act encouraged agencies to use a dispute resolution process for soliciting stakeholder comments to enhance the informal rulemaking process. See Negotiated Rulemaking Act, 5 U.S.C. § 561; see also Administrative Conference Recommendation 2017-2, Negotiated Rulemaking and Other Options for Public Engagement, 82 Fed. Reg. 31,040, 31,040-41 (June 16, 2017) (noting the infrequent use of negotiated rulemaking and suggesting that this is due to the availability of other avenues for public engagement including informal rulemaking, requests for input, technical workshops, and listening sessions—methods which provide agencies greater procedural flexibility). Public participation also occurs after-the-fact through intervention in agency adjudications, citizens and groups' informal monitoring activities, and litigation. See Cary Coglianese, Heather Kilmartin & Evan Mendelson, *Transparency and Public Participation in the Federal Rulemaking Process: Recommendations for the New Administration*, 77 GEO. WASH. L. REV. 924, 943-46 (2009) (discussing alternative ways agencies are held accountable for rulemaking).

that reflected that individual's or entity's expertise or concerns.⁴⁴ One person, one comment, and every comment made a unique contribution because it was from a unique submitter.

The three sorts of technology-enabled comments addressed in this Article do not fit this model. Many commentators believe that this departure from the past is a problem. One example: the U.S. Senate Permanent Subcommittee on Investigations' 2019 report pointed to a variety of issues associated with mass, malattributed, and computer-generated comments.⁴⁵ It saw these types of comments as contributing to “abuses” that “reduce[] the effectiveness of the notice-and-comment process; cost[] taxpayer funds to mitigate; allow[] identity theft-related crimes to go unaddressed; and leave[] the rulemaking process vulnerable to disruptive activity.”⁴⁶

The widespread outrage caused by FCC's net neutrality rulemaking—with its massive total number of comments as well as malattributed and computer-generated comments—suggests that technology-enabled comments may be a major problem; but, as we shall explore, the challenges are surmountable.

We begin this section with a taxonomy—identifying the particular sort of commenting activity that is our focus. We then turn to a discussion of the overall issues that these sorts of comments raise. In the following sections, we consider each of the three types of comments in particular.

A. *Three Types of Technology-Enabled Comments*

1. *Mass Comments*

In a relatively small number of rulemakings, agencies receive an unusually large number of comments (e.g., hundreds or thousands, as opposed to the few dozen, or fewer, that are typical).⁴⁷ We designate such situations as a “mass comment response.” We do not define a specific threshold for the number of comments to qualify as a mass comment response, as the threshold

44. Michael Herz, “Data, Views, or Arguments”: A Ruminations, 22 WM. & MARY BILL RTS. J. 351, 357 (2013).

45. See *Joint Hearing Subcommittee Report*, *supra* note 12, at 2–3, 16–17. The report also highlighted other issues with comments such as the inclusion of obscenity and copyrighted materials. *Id.* at 30–31.

46. *Id.* at 1.

47. See Coglianese, *supra* note 1717, at 953–54 (providing examples of rulemakings that have received large volume of comments); *Review of E-Rulemaking Comment Systems: Joint Hearing Before the Permanent Subcomm. on Investigations & the Subcomm. on Regul. Affs. & Mgmt. of the S. Comm. on Homeland Sec. & Governmental Affs.*, 116th Cong. 2 at 9 (2019) (statement of Dominic J. Mancini, Deputy Admin., Off. of Info. & Regul. Affs.) (noting that internal analysis “suggest[ed] that about 80% of proposed rules receive 10 or fewer comments”).

will tend to vary from agency to agency and rule to rule. As a general matter, a “mass comment response” will feature at least an order of magnitude increase (e.g., 10x) in the number of comments received vis-à-vis a typical rulemaking for that agency.⁴⁸ We use the term “mass comment campaign” to refer to the special case of a mass comment response in which one or more organizations has successfully urged a large number of individuals or groups to submit comments to the agency or allow those organization(s) to submit comments in their names.⁴⁹ Mass comment responses and mass comment campaigns have grown in frequency and scope as information and communication technologies, including e-mail and the Internet, have reduced the cost of participating in the notice-and-comment process.

2. *Malattributed Comments*

Much of the outraged reaction to the net neutrality rulemaking focused not on the sheer number or redundancy of the comments but on the fact that millions were submitted under false names, purporting to be from someone who either did not exist or had no awareness of the comment. We term comments falsely attributed to persons by whom they were not in fact submitted “malattributed” comments.⁵⁰

New technologies similarly facilitate malattributed comments. Easy access to very large data sets of personal information makes the task of malattributing comments much easier than in the past. In addition, it is possible to automate the malattribution of comments, using simple software applications coupled with publicly available information such as Department of Motor Vehicles listings or voter registration data.

48. Admittedly, this definition is somewhat arbitrary. There is no accepted definition of a “mass comment response,” and we adopt this working definition for purposes of this Article based on our interviews with agency officials.

49. See Balla, Beck, Meehan & Prasad, *supra* note 1.

50. The more common term is “fraudulent comment.” See Michael Herz, *Fraudulent Malattributed Comments in Agency Rulemaking*, 42 CARDOZO L. REV. 1, 10–12 (2020), for a more complete discussion of possible labels, including “fraudulent,” “fake,” “pseudonymous,” “fabricated,” “inauthentic,” and “misattributed.” A false name can be seen as just one instance of false statements in comments generally. We address that larger problem briefly below, but our focus is on the false identity issue alone. The question of how agencies should respond to false information included in the body of a comment is also important, but it is only tangentially related to challenges created by new technologies, which are the focus of this Article. The malattribution problem, by contrast, has been greatly accentuated by the development of new technologies.

3. *Computer-Generated Comments*

The notice-and-comment process invites interested persons to submit their views on proposed rulemakings. A tacit assumption of this invitation is that a human commenter will write the text contained within a public comment. This assumption can be violated when a software program is used to generate the text. We define “computer-generated comments” as those that are generated by a software algorithm, thus replacing both human content generation and human interaction with the agency. Although a human must create the software to accomplish this task, once automated, that individual need not further engage in the commenting process and, instead, the software can submit comments via Regulations.gov, possibly even repeatedly.⁵¹

Advances in automated text creation enable computer-generated comments. To date, computer-generated comments have been fairly crude cut-and-pastes that are easy to detect. However, researchers in the field of natural language processing (NLP) continue to make striking progress. Although the first computer program attempting to mimic human conversation was introduced in the mid-1960s,⁵² in recent years more sophisticated software is making it possible to produce comments that seem to be unique and written by humans, when they are actually produced by machines. Contemporary algorithms have achieved results that are difficult to distinguish from human writers.⁵³ If similar (or more advanced) systems were used to generate public comments, they could overwhelm an agency with an arbitrarily large number of human-quality comments. The creators of a recently developed artificial intelligence technique for generating human-like text known as GPT-3 recognized this risk, including “abuse of legal and governmental processes” among the potential misuses of text generation tools.⁵⁴ A recent experiment involving computer-generated

51. Many malattributed comments are also computer-generated comments, but neither is a full subset of the other. Some concerns—for example, that they make it look as if more people are submitting comments or taking a particular position than is in fact the case—may apply to both. Our discussion of malattributed comments, however, focuses specifically on the malattribution, not the fact that it is often done by a computer. And our discussion of computer-generated comments focuses on the source of the comment, not the fact that it may well attach a false identity to the submission.

52. See Joseph Weizenbaum, *ELIZA—A Computer Program for the Study of Natural Language Communication Between Man and Machine*, 9 COMM’NS. OF THE ACM 36, Jan. 1966, at 36.

53. See, e.g., Tom B. Brown, Benjamin Mann, Nick Ryder, Melanie Subbiah, Jared Kaplan, Prafulla Dhariwal, et al., *Language Models are Few-Shot Learners* 5 (July 22, 2020) (unpublished report) (on file at arXiv.org), ARXIV:2005.14165 (discussing the GPT-3 autoregressive language model).

54. *Id.* at 35.

comments submitted in response to a proposed Medicaid waiver, which we describe below, gives a glimpse of the potential of this technology to produce realistically human comments in the rulemaking process.⁵⁵

Such advances need not necessarily be problematic. One can envision computer-generated comments that add value to the rulemaking process. For example, a program could review an agency's published proposed rule for spelling errors, broken links, and other simple errors and then file a comment in the relevant docket to provide a report of these errors. In this example, the program is not providing input on policy views; it is merely providing technical assistance.

In addition, there may be more sophisticated ways to bring the benefits of big data and artificial intelligence to the comment process. In the same way that credit card companies can offer fraud alerts to individual cardholders when purchasing activity is unusual, perhaps there are ways for people to leverage technology to assist them in producing draft comments based on the interests they have expressed through their purchasing habits or other administrative data. There are plenty of operational, privacy, and other issues to consider, but we raise it here as a possibility that may caution against overly restrictive approaches to computer-generated comments.⁵⁶ To the extent that these types of tools could help overcome the collective action problems that inhibit public participation in the rulemaking process, they could offer a useful path forward.

B. Challenges Posed by Technology-Enabled Comments

All three types of comments we discuss in this Article affect the rulemaking process. We explore in more detail below the specific challenges posed by mass, malattributed, and computer-generated comments. But, first, it is important to note that these technology-enabled comments are not an entirely new phenomenon.

With respect to mass comments, there were high-salience rulemakings that generated substantial numbers of public comments prior to the advent of online commenting. For example, in the Food and Drug Administration's 1995–1996 rulemaking, in which it first asserted regulatory authority over tobacco cigarettes, it received over seven hundred thousand paper comments, many of which were identical, so-called “post card” comments.⁵⁷

55. See *infra* text accompanying notes 198–205.

56. Two of this Article's co-authors expanded on these themes. See Bridget C.E. Dooling & Michael Livermore, *Bot-Generated Comments on Government Proposals Could Be Useful Someday*, SLATE (June 21, 2021), <https://slate.com/technology/2021/06/bot-generated-comments-on-regulatory-proposals-could-be-useful.html>.

57. Regulations Restricting the Sale and Distribution of Cigarettes and Smokeless Tobacco to Protect Children and Adolescents, 61 Fed. Reg. 44,396, 44,418 (proposed Aug. 28, 1996). As

Yet orchestrating a campaign to mail in masses of comments was much more burdensome and expensive than it is now. Once it became possible to comment with the click of a button, mass participation, both spontaneous and orchestrated, became much more straightforward—as did the potential for duplicative comments.⁵⁸

Similarly, it has always been the case that a commenter could sign a phony name to a comment or include other falsehoods in the comment. But the digital availability of personal information, automation tools, and online submission makes it much easier to submit such comments at scale. And the difficulty of identifying misleading or mislabeled comments is heightened in a deluge of comments.

Even computer-generated comments could, in theory, have been submitted on paper. Automated text-generation software has existed since the 1960s, and it would be a trivial task to print out computer-generated text and place it in the mail. Again, however, the shift to electronic submissions—alongside tremendous advances in artificial intelligence and NLP in recent years—facilitates and reduces the costs of submitting comments written by computers.

All three of these types of comments can generate serious challenges to agencies, raising a pressing set of questions concerning how best to respond while preserving a functional rulemaking process. We now turn to exploring what is at stake with mass, malattributed, and computer-generated comments.

1. *Information Quality*

Agency rulemakings often touch on important areas of social and economic life and can have complex and difficult-to-anticipate effects. Agencies bring considerable internal expertise to the task of crafting rules, and officials can also often draw on published research. However, there is often useful information that an agency might not have readily at hand during its deliberations, and a benefit of notice-and-comment rulemaking is the public's opportunity to bring such information to the agency's attention.

the Food and Drug Administration described it:

Altogether, the agency received more than 700,000 pieces of mail, representing the views of nearly 1 million individuals. Most of the submissions were form letters or post cards. The agency identified more than 500 different types of form letters. Others were petitions with sometimes hundreds of signatures. More than 95,000 submissions expressed individual comments on the 1995 proposed rule, including more than 35,000 from children who were overwhelmingly supportive.

Id. (footnote omitted).

58. See Beth Simone Noveck, *The Electronic Revolution in Rulemaking*, 53 EMORY L.J. 433, 441–42 (2004) (expressing concern that new technology might open the floodgates to “notice-and-spam” rulemaking).

Often, the most useful information for an agency will be technical or operational. This type of information includes scientific or engineering studies, relevant data, analysis about how well the proposed regulatory change will address the problem being solved, what kind of changes compliance will require, or legal or policy analysis. Technical or operational information empowers agency decisionmakers to anticipate the consequences of the choices they face in designing regulations. Information along these lines facilitates higher-quality rulemakings, where quality is understood in terms of technical or operational proficiency.

A second type of information concerns conclusions drawn by stakeholders or members of the public concerning the desirability of a rulemaking.⁵⁹ Under the APA, agencies must consider relevant substantive arguments offered by commenters in support of their conclusions.⁶⁰ But the status of the ultimate evaluation offered by a commenter is less clear. There is a debate among administrative law scholars concerning the extent to which agencies should consider commenter preferences. Cynthia Farina, for example, has argued that the deliberative and technical nature of the rulemaking process makes consideration of pure expressions of preference inappropriate, especially if they are not informed or representative.⁶¹ Nina Mendelson, by contrast, has argued that expressions of preference can and should be considered by agencies, at least in some contexts, because agencies are often called on to “decide values and policy questions left unresolved by their authorizing statutes.”⁶² For Mendelson, concerns about representativeness,

59. See, e.g., Coglianese, Kilmartin & Mendelson, *supra* note 43 (emphasizing the potential side effects of focusing only on increasing participation and transparency in agency rulemaking).

60. See 5 U.S.C. § 553(c).

61. Cynthia R. Farina, Mary Newhart, Josiah Heidt & CeRI, *Rulemaking vs. Democracy: Judging and Nudging Public Participation that Counts*, 2 MICH. J. ENV'T & ADMIN. L. 123, 137–39 (2012).

62. Nina A. Mendelson, *Rulemaking, Democracy, and Torrents of E-Mail*, 79 GEO. WASH. L. REV. 1343, 1350–51 (2011) [hereinafter Mendelson, *Rulemaking, Democracy*]; see also Nina A. Mendelson, *Should Mass Comments Count?*, 2 MICH. J. ENV'T & ADMIN. L. 173, 181 (2012) (“Agency officials might pay attention to large volumes of comments, for example, to help gauge public resistance or anticipate significant opposing views.”). This debate tracks, in certain respects, the scholarly conversation on whether courts should accept “political reasons” as justifications for agency decisions. See Jodi L. Short, *The Political Turn in American Administrative Law: Power, Rationality, and Reasons*, 61 DUKE L.J. 1811, 1816 (2012) (arguing that “political reason giving . . . is likely to erode the social mechanisms that shape agencies as organizations and that discipline their day-to-day activities”); Nina A. Mendelson, *Disclosing “Political” Oversight of Agency Decision Making*, 108 MICH. L. REV. 1127, 1127 (2010) (suggesting that some political reasons might be legitimate but legitimacy can only be determined through a transparent rulemaking process); Kathryn A. Watts, *Proposing a Place for Politics in Arbitrary and Capricious Review*, 119 YALE L.J. 2, 84 (2009) (arguing that political reasons have a place in

for example, must be balanced against the drawbacks of ignoring the sentiments of those who have taken the time to comment.⁶³

Setting aside this debate, there are also substantive limits on the kinds of information that agencies may consider in the course of rulemaking.⁶⁴ Under the *State Farm* formulation, “[n]ormally, an agency rule would be arbitrary and capricious if the agency *has relied on factors which Congress has not intended it to consider.*”⁶⁵ There are many examples where courts have found limits on agencies’ ability to consider certain factors. For example, in *Whitman v. American Trucking Ass’n*,⁶⁶ the Court found that the EPA may not consider costs when setting the National Ambient Quality Standards under the Clean Air Act.⁶⁷ Accordingly, public preferences concerning whether the benefits of more stringent air quality standards outweigh the costs are not relevant under *American Trucking*.⁶⁸

Mass, malattributed, and computer-generated comments can make it difficult to extract both technical/operational and preference information from the notice-and-comment process, but the potential challenges for preference information are greater. With respect to technical/operational information, the identity of the commenter (even whether the commenter is a human being) and how frequently that information appears in the record will often not be relevant. The primary challenge raised by mass, malattributed, and computer-generated comments is that useful technical/operational information may be difficult to find within a large flood of comments.

arbitrary and capricious review—granted the agency openly discloses them in the rulemaking record). More broadly, the debate about the appropriate role for consideration of expressions of preference in public comments tracks alternative views about the legitimate foundations of administrative decisionmaking. See generally Vanessa Duguay, *Views or Votes: The Challenge of Mass Comments in Rulemaking*, 26 GEO. MASON L. REV. 625 (2018) (discussing the justification for dismissing public approval in rulemaking through different models of legitimacy); Steven P. Croley, *Public Interested Regulation*, 28 FLA. ST. U. L. REV. 7, 7 (2000) (exploring the limitations of interest group theory in the regulation and what rulemaking initiatives make broad-based regulation possible); Mark Seidenfeld, *A Civic Republican Justification for the Bureaucratic State*, 105 HARV. L. REV. 1511 (1992) (arguing that civic republicanism theory is consistent with assigning broad policymaking discretion to administrative agencies).

63. Nina A. Mendelson, *supra* note 62, at 175, 177.

64. See Stuart Minor Benjamin, *Evaluating E-Rulemaking: Public Participation and Political Institutions*, 55 DUKE L.J. 893, 906–07 (2006) (“Many statutes leave no room for an agency to consider public sentiment.”).

65. *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (emphasis added).

66. 531 U.S. 457 (2001).

67. *Id.* at 465.

68. See *id.* (holding that the EPA could not take into account cost saving factors when calculating air quality standards).

Preference information, by contrast, would only be relevant inasmuch as it relates to the views of a genuine person, making it necessary to separate bot and malattributed comments from those that are genuinely submitted by a person. Further, for rules that result in a mass comment response, agencies face a range of difficult questions, discussed in more detail below, concerning the representativeness of the pool of commenters and the role of intermediary groups that conduct mass comment campaigns.⁶⁹

Finally, information is valuable only if it is accurate. When a comment contains false or erroneous statements, intentional or otherwise, it can, at the very least, create a distraction for the agency and possibly delay the comment's processing. If the falsehood is important and undiscovered, it could negatively affect the substance of the final rule. From the outset, one concern about e-rulemaking has been that it would lead to agencies being deluged with misinformation.⁷⁰ The agency personnel we interviewed reported that misinformation in comments has not been a major problem to date. Presumably this is for at least two reasons. First, agencies are repositories of significant expertise. That means they will often recognize substantive errors in comments or at least know enough to realize that further investigation is required. Second, broad participation is a prophylactic against misinformation; the false submission might be countered by a true one, often multiple true ones. This is not to dismiss all concerns about false submissions, which may be seen as a growing concern, but it is a reminder that a falsehood in a comment is only a small first step toward a substantive error in a final rule.

2. *Legitimacy*

The concept of legitimacy is complex and its full exegesis is beyond the scope of this Article. We focus on the potential effects of mass, malattributed, and computer-generated comments on positive (or sociological) legitimacy,⁷¹ as distinct from normative or moral legitimacy.⁷²

69. See discussion *infra* Section III.B.

70. See, e.g., Daniel C. Esty, *Environmental Protection in the Information Age*, 79 N.Y.U. L. REV. 115, 172 (2004) ("The promise of cyberdemocracy with a fully informed and engaged populace could give way to 'spam,' misinformation, and dialogue among the uninformed that diminishes thoughtful deliberation.").

71. Questions concerning the sociological legitimacy of the state reach back to the foundations of contemporary social sciences. See Max Weber, *Die drei reinen Typen der legitimen Herrschaft*, 187 PREUSSISCHE JAHRBÜCHER 1, 1 (1922) (appearing later as Max Weber, *The Three Types of Legitimate Rule*, 4 BERKELEY PUBL'NS IN SOC'Y & INSTS. 1, 1-2 (1958) (Han Gerth trans.)). These questions arise for all governmental bodies but are particularly pressing for those with more tenuous relationships with the electoral process. Cf. Jeffery J. Mondak, *Policy Legitimacy and the Supreme Court: The Sources and Contexts of Legitimation*, 47 POL. RSCH. Q. 675, 690 (1994); James L. Gibson, *Understandings of Justice: Institutional Legitimacy, Procedural Justice, and Political Tolerance*, 23 LAW & SOC'Y REV. 469, 471 (1989).

72. Cf. Richard H. Fallon, Jr., *Legitimacy and the Constitution*, 118 HARV. L. REV. 1787,

There is a considerable body of behavioral and social scientific research on the causes of positive legitimacy, which concerns empirical questions related to public acceptance of the exercise of government power.⁷³ One important thread of that literature concerns perceptions of “procedural fairness” and the components of decisionmaking processes that tend to enhance or undermine those perceptions.⁷⁴ In a recent Organisation for Economic Co-operation and Development report by E. Allan Lind and Christiane Arndt summarizing some of this literature, the authors identify “[t]hree general elements of process . . . [that] stand out in terms of their impact on whether a citizen will feel fairly treated in his or her interactions with government . . . voice, polite and respectful treatment, and explanations.”⁷⁵ The authors define voice as “a chance [for affected people] to present their views” along with “some indication that the input was actually given consideration.”⁷⁶ According to this review of the literature, voice “remains the most extensively researched and arguably the most powerful antecedent of perceived procedural fairness.”⁷⁷

The relationship between voice and the notice-and-comment process is obvious—the APA requirement that agencies solicit and consider the views of interested persons maps exactly onto the definition of voice offered by Lind and Arndt. Based on current research in the field, there is reason to believe that the notice-and-comment process enhances the positive legitimacy of agency rulemaking, particularly when compared to an imagined counterfactual in which there is no consistent opportunity for the public to comment or such comments are not considered by agency decisionmakers.⁷⁸

Malattributed and computer-generated comments may undermine the confidence of members of the public in their ability to have their voices heard. Observers reasonably worry that computer-generated comments submitted at scale could drown out comments from real persons, create confusion on relevant issues, or prompt an agency to ignore even legitimate comments.⁷⁹ For malattributed comments, the risk is that they could be

1790 (2005); Paul Weithman, *Legitimacy and the Project of Political Liberalism*, in RAWLS’S POL. LIBERALISM 73 (T. Brooks and M. Nussbaum eds. 2015).

73. See, e.g., James L. Gibson & Michael J. Nelson, *The Legitimacy of the US Supreme Court: Conventional Wisdoms and Recent Challenges Thereto*, 10 ANN. REV. L. SOC. SCI. 201 (2014).

74. E. Allan Lind & Christiane Arndt, *Perceived Fairness and Regulatory Policy: A Behavioural Science Perspective on Government-Citizen Interactions* 20 (Org. Econ. Coop. & Dev., Working Paper No. 6, 2016), <https://doi.org/10.1787/24140996>.

75. *Id.*

76. *Id.*

77. *Id.*

78. See *id.* at 21.

79. See, e.g., *Fake It Till They Make It*, *supra* note 3, at 9 (statement of Paulina Gonzalez-

perceived as hijacking or expropriating a person's voice. These issues will be discussed in more detail below.

Mass comments present other questions concerning their interaction with voice and perceptions of procedural fairness. Lower costs of submitting comments and broader public participation creates more widespread opportunities for voice. But if comments contain information that agencies may not or do not consider—including expressions of preference—it is not clear that the process will ultimately enhance perceptions of procedural fairness. As noted by Lind and Arndt, “[R]esearch on voice makes it clear that it is not enough just to allow for more raw input or comment: There must also be some indication that the input was actually given consideration.”⁸⁰ A mismatch between commenter expectations and agency treatment of comments raises serious concerns, which are discussed in more detail below.

It is worth emphasizing that for purposes of positive legitimacy, *perceptions* of procedural fairness matter, irrespective of how well those perceptions map onto reality. For example, even if agencies are able to easily sort through bot or malattributed comments, these phenomena could lead to misimpressions about the integrity of the system that undermine public confidence in the process.⁸¹ Experience with the FCC's net neutrality rulemaking demonstrates that the public comment process can become publicly salient without warning, with the associated risks of sensational commentary and the potential for people to draw inferences about the entire process based on an exceptional example.⁸²

Brito, Executive Director, California Reinvestment Coalition) (stressing the need to ensure that community voices are not drowned out by fabricated comments fraudulently submitted in favor of industry); Bob Barr, *Massive Fraud in Net Neutrality Process Is a Crime Deserving of Justice Department Attention*, TOWNHALL. (Dec. 20, 2017, 12:01 AM), <https://townhall.com/columnists/bobbarr/2017/12/20/massive-fraud-in-net-neutrality-process-is-a-crime-deserving-of-justice-department-attention-n24247241> (“[B]efore too long, the voices of real people, expressing genuine opinions on regulations, will be drowned out and ignored all together by those in power.”); Eric T. Schneiderman, *An Open Letter to the FCC*, MEDIUM (Nov. 21, 2017), <https://medium.com/@NewYorkStateAG/an-open-letter-to-the-fcc-b867a763850a> (objecting that “the perpetrator or perpetrators attacked what is supposed to be an open public process by attempting to drown out and negate the views of the real people, businesses, and others who honestly commented on this important issue.”).

80. Lind & Arndt, *supra* note 7475, at 20.

81. “The last thing we need is a common view that essentially the entire rulemaking process is being gamed by a variety of machines and shadowy players.” Nicole Ogrysko, *GSA Launches Public Campaign to Battle Bots, Fake Comments from Online Rulemaking Forums*, FED. NEWS NETWORK (Jan. 31, 2020, 4:45 PM) (quoting Michael Fitzpatrick, head of global regulatory affairs for Google), <https://federalnewsnetwork.com/management/2020/01/gsa-launches-public-campaign-to-battle-bots-fake-comments-from-online-rulemaking-forums/>.

82. See discussion *infra* Section V.B.

In addition to perceptions of procedural fairness, scholars have identified an alternative source of positive legitimacy: it flows from the outcomes of government decisions themselves.⁸³ The basic idea is that high quality, effective government decisionmaking leads to public acceptance. If mass, malattributed, or computer-generated comments reduce regulatory quality by, for example, making it more difficult for agencies to extract useful information from the notice-and-comment process, then, over time, they could erode confidence in agency decisionmaking.

3. *Processing Costs*

It takes time and resources to review, analyze, respond to comments, and use the insights to recraft the rule. When there is a small number of comments, those costs are relatively low. As the number of comments grows, processing costs can be expected to increase. For example, agencies sometimes hire outside contractors to help process comments, which helps alleviate the processing burden, but adds to the overall expense.⁸⁴ When agencies do this work in-house, the review process, albeit important, consumes significant staff time.⁸⁵ Similarly, if agencies must spend resources to identify malattributed or computer-generated comments, that only further increases processing costs. Time spent sorting out mass, malattributed, and computer-generated comments can also delay the process and takes time away from other productive policymaking activities.

When the informational and legitimacy-conferring benefits of comments are high, then the time invested may be well worth their processing costs. Nevertheless, the direct financial and delay costs of spurious or low-quality comments are nontrivial and worth keeping in mind.

III. MASS COMMENTS

Large volumes of public comments present both opportunities and challenges for agencies. On the one hand, participation in the notice-and-comment process demonstrates substantial interest in agency rulemaking, which creates occasions for meaningful engagement between agencies and the public. Public comments can also contain helpful information that agencies can use to improve their rulemakings. On the other hand, large volumes of comments are burdensome to process and digest, increase the risk of missing important arguments or information, and may make it more difficult to extract overall patterns in the content of comments.

83. See, e.g., FRITZ SCHARPF, *GOVERNING IN EUROPE: EFFECTIVE AND DEMOCRATIC?* 11 (1999) (distinguishing “input-oriented” and “output-oriented” forms of democratic legitimacy).

84. Bridget C.E. Dooling, *Legal Issues in E-Rulemaking*, 63 *ADMIN. L. REV.* 893, 901 (2011).

85. *Id.*

As noted above, for purposes of this Article, we distinguish between a mass comment response and a mass comment campaign.⁸⁶ The latter is a special case of a mass comment response in which an individual or organization successfully urges a large number of individuals to file comments that express a similar set of views or positions.⁸⁷ Often, comments made in response to a mass solicitation contain identical or nearly identical language.⁸⁸ The soliciting organization may post a sample comment and encourage the submitter to file the comment verbatim but include a sentence or two at the end explaining how the rule personally affects the submitter. It is also possible that soliciting organizations may encourage submissions of unique—if substantively similar—comments. In such cases, it may be difficult to disentangle a mass comment campaign from a more spontaneous mass response.

A. *Legal Issues Raised by Mass Comments*

Courts have had many opportunities to visit the question of how agencies must consider information generated during the notice-and-comment process. In one early and important formulation, the D.C. Circuit's *Home Box Office, Inc. v. FCC*⁸⁹ opinion provided the following standard:

In determining what points are significant, the “arbitrary and capricious” standard of review must be kept in mind. Thus only comments which, if true, raise points relevant to the agency’s decision and which, if adopted, would require a change in an agency’s proposed rule cast doubt on the reasonableness of a position taken by the agency. Moreover, comments which themselves are purely speculative and do not disclose the factual or policy basis on which they rest require no response. There must be some basis for thinking a position taken in opposition to the agency is true.⁹⁰

A few years previously, in the canonical *Portland Cement Ass’n v. Ruckelshaus*⁹¹ decision, Judge Leventhal expressed a similar sentiment, writing that “comments must be significant enough to step over a threshold requirement of materiality before any lack of agency response or consideration becomes of concern.”⁹² More recently, the D.C. Circuit stated the point this way: “An agency is not obliged to respond to every comment, only those that can be

86. See discussion *supra* Section II.A.1.

87. See Balla, Beck, Meehan & Prasad, *supra* note 1.

88. Dooling, *supra* note 84, at 901.

89. 567 F.2d 9 (D.C. Cir. 1977).

90. *Id.* at 35–36 n.58; see *Pub. Citizen, Inc. v. FAA*, 988 F.2d 186, 197 (D.C. Cir. 1993) (citing *HBO*, 567 F.2d at 35–36 n.58 for standard); *Nat’l Shooting Sports Found., Inc. v. Jones*, 716 F.3d 200, 215 (D.C. Cir. 2013) (also citing *HBO*, 567 F.2d at 35–36 n.58 for standard).

91. 486 F.2d 375 (D.C. Cir. 1973).

92. *Id.* at 394. This language continues to be cited by courts to express the relevant standard. See, e.g., *Am. Great Lakes Ports Ass’n v. Zukunft*, 296 F. Supp. 3d 27, 53 (D.D.C. 2017).

thought to challenge a fundamental premise.”⁹³

Courts have repeatedly noted that agencies are required to consider the substance of comments: “An agency need not respond to every comment, but it must ‘respond in a reasoned manner to the comments received, to explain how the agency resolved any significant problems raised by the comments, and to show how that resolution led the agency to the ultimate rule.’”⁹⁴ There is no obligation to respond to comments *per se*.⁹⁵ Rather, “[t]he failure to respond to comments is significant only insofar as it demonstrates that the agency’s decision was not ‘based on a consideration of the relevant factors.’”⁹⁶

A corollary to this focus on the substance of comments has been a tendency to deemphasize the importance of the number of comments received. The D.C. Circuit has stated directly that agencies are under “no obligation to take the approach advocated by the largest number of commenters,”⁹⁷ and there is a broad consensus that the public comment process is “not a vote.”⁹⁸ Where courts have explicitly considered the number of comments received by an

93. *MCI WorldCom, Inc. v. FCC*, 209 F.3d 760, 765 (D.C. Cir. 2000); *see also* *Am. Mining Cong. v. EPA*, 907 F.2d 1179, 1187–88 (D.C. Cir. 1990) (“[I]n assessing the reasoned quality of the agency’s decisions, we are mindful that the notice-and-comment provision of the APA . . . ‘has never been interpreted to require [an] agency to respond to every comment, or to analyse [sic] every issue or alternative raised by comments, no matter how insubstantial.’”) (quoting *Thompson v. Clark*, 741 F.2d 401, 408 (D.C. Cir. 1984)).

94. *Action on Smoking & Health v. Civ. Aeronautics Bd.*, 699 F.2d 1209, 1216 (D.C. Cir. 1983) (quoting *Rodway v. U.S. Dep’t of Agric.*, 514 F.2d 809, 817 (D.C. Cir. 1975)); *see* *South Carolina ex rel. Tindal v. Block*, 717 F.2d 874, 885 (4th Cir. 1983) (“The purpose of allowing comments is to permit an exchange of views, information, and criticism between interested persons and the agency.”).

95. *Sherley v. Sebelius*, 689 F.3d 776, 784 (D.C. Cir. 2012) (“[A]n agency’s failure to address a particular comment or category of comments is not an APA violation *per se*.”); *United States v. Nova Scotia Food Prods. Corp.*, 568 F.2d 240, 252 (2d Cir. 1977) (“We do not expect the agency to discuss every item of fact or opinion included in the submissions made to it in informal rulemaking.”) (quoting *Auto. Parts & Accessories Ass’n v. Boyd*, 407 F.2d 330, 338 (D.C. Cir. 1968)).

96. *Thompson*, 741 F.2d at 409 (quoting *Citizens to Pres. Overton Park v. Volpe*, 401 U.S. 402, 416 (1971)); *see also* *Covad Commc’ns Comm’n v. FCC*, 450 F.3d 528, 550 (D.C. Cir. 2006) (citing *Thompson*, 741 F.2d at 409).

97. *U.S. Cellular Corp. v. FCC*, 254 F.3d 78, 87 (D.C. Cir. 2001); *see also* *Nat. Res. Def. Council, Inc. v. EPA*, 822 F.2d 104, 122 n.17 (D.C. Cir. 1987) (noting that rulemaking is not a process where “the majority of commenters prevail by sheer weight of numbers”).

98. *Herz*, *supra* note 44, at 369–74; *see also* *Dooling*, *supra* note 84, at 901 n.33 (discussing the importance of a comment’s threshold requirement of materiality); *Tips for Submitting Effective Comments*, REGULATIONS.GOV 1, <https://www.regulations.gov/document/FS-2018-0053-0007> (last visited Feb. 19, 2022) (“The comment process is not a vote.”).

agency,⁹⁹ it has not been in the context of evaluating the reasoned basis for an agency's decision to choose one approach over another.

Although courts have emphasized the importance of substance over volume in evaluating agency responses to public comments, there is no general bar against agencies relying on information contained in form comments. For example, the plaintiffs in *Resident Councils v. Leavitt*¹⁰⁰ argued that a regulation was invalid because the vast majority of the supportive comments on the proposed rule were form letters and the agency's reliance on them was therefore unwarranted.¹⁰¹ The court disagreed, stating that "there is no reason the Secretary was not entitled to rely on such letters in promulgating the regulations."¹⁰² The court followed up by stating that just because numerous people "share the same opinion and pooled their efforts does not undermine their intended show of support."¹⁰³

99. For example, in *North Carolina Growers' Ass'n v. United Farm Workers*, the court found that a truncated comment period with substantial content restrictions was inadequate, in part relying on the small number of comments received compared to a prior related rulemaking. *N.C. Growers' Ass'n v. United Farm Workers*, 702 F.3d 755, 770–71 (4th Cir. 2012); *see also* *Cal. ex rel. Becerra v. U.S. Dep't of the Interior*, 381 F. Supp. 3d 1153, 1176–79 (N.D. Cal. 2019). Some courts have also looked to the number of comments received during the National Environmental Policy Act (NEPA) review process to determine whether a project is "controversial" and therefore requires a full environmental impact statement, although there is disagreement over the relevance of the scale of public reaction to that inquiry. *Sierra Club v. Bosworth*, 510 F.3d 1016, 1032 (9th Cir. 2007) ("Given the large number of comments, close to 39,000, and the strong criticism from several affected Western state agencies, we cannot summarily conclude that the effects of the Fuels CE are not controversial."); *see also* *Greenpeace Action v. Franklin*, 14 F.3d 1324, 1333–34 (9th Cir. 1992) (noting that an "outpouring of public protest" along with a "substantial dispute . . . as to size, nature, or effect" of a proposed action can demonstrate that the action is controversial and therefore requires an environmental impact statement (citations omitted)); Emily M. Slaten, Note, "*We Don't Fish in Their Oil Wells, and They Shouldn't Drill in Our Rivers*": *Considering Public Opposition Under NEPA and the Highly Controversial Regulatory Factor*, 43 IND. L. REV. 1319, 1320 (2010) (arguing that public reaction should be considered in determining whether a project is controversial in light of "growing criticisms of NEPA, recent attention given toward advancing public participation in NEPA, and increasing environmental justice concerns") (citations omitted).

100. 500 F.3d 1025 (9th Cir. 2007).

101. *Id.* at 1029 n.5.

102. *Id.*

103. *Id.* *See Morales v. Lyng*, 702 F. Supp. 161 (N.D. Ill. 1988), for another discussion on the role of form comments. In this case, the Department of Agriculture was found to have acted in an arbitrary and capricious manner by choosing to generally ignore certain comments. The Secretary of Agriculture argued that the ignored comments were "endless clones of conclusory statements." *Id.* at 163. However, the court found that by choosing to ignore these comments that offered a differing view than that chosen by the agency, the agency

B. Policy Issues Raised by Mass Comments

Mass comment responses raise many policy issues, whether or not they are a part of an organized comment campaign. Many researchers found that a large percentage of the comments received in mass comment responses are not highly substantive, but rather contain general statements of support or opposition.¹⁰⁴ As mentioned above, there is some debate concerning whether and to what extent agencies should consider comments that contain only statements of preference.¹⁰⁵

The Permanent Subcommittee on Investigations of the U.S. Senate's Homeland Security and Governmental Affairs Committee has recommended that Congress consider amending the APA to provide guidance to agencies on the extent to which they should consider the volume of comments in favor of or in opposition to a proposed rule.¹⁰⁶ Guidance from Congress could be helpful to agencies in deciding when, if ever, they should take the number of comments and the sentiment expressed in the comments into account when finalizing a rule.

Inasmuch as public opinion is relevant for a rulemaking, comments generally do not provide a reliable metric of the views of the broader public. Commenters are an entirely self-selected group, and there is no reason to believe that they are in any way representative of the larger public. Relatedly, the group of commenters may represent a relatively privileged group, with less advantaged members of the public less likely to engage in this form of political participation.¹⁰⁷

had impermissibly “failed to consider important aspects of the administrative record and hence the issue itself.” *Id.*

104. Thomas A. Bryer, *Public Participation in Regulatory Decision-Making: Cases From Regulations.gov*, 37 PUB. PERFORMANCE & MGMT. REV. 263, 263 (2013) (analyzing EPA and Department of Health and Human Services rulemakings and finding that many comments were “emotional, illogical and lacking in credibility”); Kimberly D. Krawiec, *Don’t “Screw Joe the Plummer”: The Sausage-Making of Financial Reform*, 55 ARIZ. L. REV. 53, 58 (2013) (contrasting industry comments on the Securities and Exchange Commission’s Volcker Rule, which were “meticulously drafted, argued, and researched” with “citizen letters [which were] short and provide little evidence that citizen commenters even understand, or care, what proprietary or fund investment is, much less the ways in which agency interpretation of the Volcker Rule’s complex and ambiguous provisions might govern such activities”); Stuart W. Shulman, *The Case Against Mass E-mails: Perverse Incentives and Low Quality Public Participation in U.S. Federal Rulemaking*, 1 POL’Y & INTERNET 23 (2009) (arguing the many comments lack substantive merit).

105. See *supra* Section II.B.1.

106. *Joint Hearing Subcommittee Report*, *supra* note 12, at 3.

107. See Beth Simone Noveck, *The Electronic Revolution in Rulemaking*, 53 EMORY L.J. 433, 455 (2004) (suggesting that without hiring lawyers or lobbyists, the wider public may be viewed as unable to participate usefully).

There are also questions related to the actual influence of mass comment responses on agency decisionmaking. There is considerable social science literature that examines the public comment process and how it affects regulatory outcomes.¹⁰⁸ An important early paper by Marissa Golden found that business interests tended to dominate the rulemaking process, but that the overall influence of comments was low.¹⁰⁹ Subsequent work has found that, at least under certain conditions, agencies sometimes do make changes in response to comments.¹¹⁰ Among the factors that have been found to affect commenter influence is the degree of sophistication in the comments and the source of the comment.¹¹¹ Studies of mass commenting in particular have found that agencies tend to be fairly unresponsive to mass comment

108. For an overview of this literature, see Susan Webb Yackee, *The Politics of Rulemaking in the United States*, 22 ANN. REV. POL. SCI. 37 (2019). An important general point is that other mechanisms for interested parties to affect agency decisionmaking, such as ex parte communications during the pre-proposal stage, may be more influential than the public comment process. See Jeffrey J. Cook, *Crossing the Influence Gap: Clarifying the Benefits of Earlier Interest Group Involvement in Shaping Regulatory Policy*, 42 PUB. ADMIN. Q. 466 (2018); Susan Webb Yackee, *The Politics of Ex Parte Lobbying: Pre-Proposal Agenda Building and Blocking during Agency Rulemaking*, 22 J. PUB. ADMIN. RES. & THEORY 373 (2012).

109. Marissa Martino Golden, *Interest Groups in the Rule-Making Process: Who Participates? Whose Voices Get Heard?*, 8 J. PUB. ADMIN. RES. & THEORY 245 (1998). That study involved analysis of comments received by three agencies (EPA, Department of Housing and Urban Development, and National Highway Traffic Safety Administration) to a set of eleven rulemakings. *Id.* at 245. Generally, Golden finds that “business commenters” dominated the public comment process, as “[b]etween 66.7 percent and 100 percent of the comments received were submitted by corporations, public utilities, or trade associations.” *Id.* at 252–53. However, Golden did not find a large substantive impact from the business community’s participation; she attributed this lack of influence in part due to the fact that “business did not present a united front[.] . . . [t]here were frequently divisions *within* the business community.” *Id.* at 262.

110. Amy McKay & Susan Webb Yackee, *Interest Group Competition on Federal Agency Rules*, 35 AM. POL. RSCH. 336 (2007); Susan Webb Yackee, *Sweet-Talking the Fourth Branch: The Influence of Interest Group Comments on Federal Agency Rulemaking*, 16 J. PUB. ADMIN. RSCH. & THEORY 103 (2006).

111. Mariano-Florentino Cuéllar, *Rethinking Regulatory Democracy*, 57 ADMIN. L. REV. 411 (2005) (identifying three instances in which agencies modified proposals in light of submissions from non-business commenters); Jason Webb Yackee & Susan Webb Yackee, *A Bias Towards Business? Assessing Interest Group Influence on the U.S. Bureaucracy*, 68 J. POL. 128, 133–35 (2006) (finding that agencies consistently alter proposals to reflect comments from business interests but not others). One article observes: “The relatively high value placed on hard data in comments is best summed up by the interviewee who stated, ‘We look at every comment; we consider every comment. But unless there is data supporting the position, it’s just not that useful in the rulemaking process.’” Keith Naughton, Celeste Schmid, Susan Webb Yackee & Xueyong Zhan, *Understanding Commenter Influence During Agency Rule Development*, 28 J. POL’Y ANALYSIS & MGMT. 258, 270 (2009).

campaigns,¹¹² and, to the extent they ever refer to the number of comments received in favor of or in opposition to a rule, they do so in opportunistic ways.¹¹³ Some have argued that the reality that agencies are unlikely to alter rules in response to less substantive comments provides a reason to discourage, or at least “not actively facilitate[,] public participation” of this sort.¹¹⁴

Direct influence may not be the only motivation behind comments, and advocacy groups may solicit mass comments for many different reasons. Research on mass comment campaigns suggests that different groups carry out such campaigns to promote a range of goals, including calling public attention to a rulemaking.¹¹⁵ Others have pointed to internal organizational goals—such as increasing membership, raising financial contributions, and moving members up the “ladder of engagement” towards greater involvement—as a motivation for efforts to mobilize actions like petition-signing and sending public comments.¹¹⁶

112. Balla, Beck, Meehan & Prasad, *supra* note 1, at 1 (finding that agencies give mass comments limited attention in the preambles to final rules and that “regulations are generally not consistent with changes requested in comments, a lack of association that holds especially for mass comment campaigns”). Some observers have identified cases where mass comments (at least arguably) influenced regulatory outcomes. See Lauren Moxley, *E-Rulemaking and Democracy*, 68 ADMIN. L. REV. 661, 692–95 (2016) (attributing change in FCC’s 2015 final net neutrality rule to large number of and consensus among commenters).

113. See Herz, *supra* note 44, at 372–73 (“When [the agencies’] conclusion has strong support in the [mass] comments they tend to note that fact, and when it does not they tend to glide over it.”) (citations omitted); Parrillo, *Should the Public Get to Participate*, *supra* note 20, at 71.

114. Farina, Newhart, Heidt & CeRI, *supra* note 61, at 150 (“A democratic government should not actively facilitate public participation that it does not value.”).

115. Steven J. Balla, Alexander R. Beck, William C. Cubbison & Aryamala Prasad, *Where’s the Spam? Interest Groups and Mass Comment Campaigns in Agency Rulemaking*, 11 POL’Y & INTERNET 460 (2019). The authors find that campaigns organized by regulated entities are more substantive than campaigns organized by regulatory beneficiaries. *Id.* at 460. Regulatory beneficiaries sponsored 73% of mass comment campaigns analyzed (87% of campaigns with 1,000+ comments), whereas regulated entities sponsored 27% of mass comment campaigns (13% of those over 1,000 comments). *Id.* at 471–72. Campaigns sponsored by regulatory beneficiaries were larger, averaging 15,783 comments, whereas those by regulated entities received an average of 4,345 comments. *Id.* at 472. Regulatory beneficiaries stated in interviews that during the Obama Administration, mass comment campaigns were used to help the EPA justify proposed actions, whereas during the Trump-era the campaigns were used to cause the Administration to “feel pain” in the media and public opinion. *Id.* Regulated entities, on the other hand, stated in interviews that they use mass comment campaigns to try and counterbalance the mobilization by regulatory beneficiaries. *Id.*

116. Farina, Newhart, Heidt & CeRI, *supra* note 61, at 141; David Karpf, *Online Political Mobilization from the Advocacy Group’s Perspective: Looking Beyond Clicktivism*, 2 POL’Y & INTERNET 1, 35 (2010) (“[Organizations use] email to mobilize member interest around their top campaign priority, as a first step in a ladder-of-engagement.”); Shulman, *supra* note 104104104, at 27–30.

Scholars have identified several potential problems with mass comment campaigns. Some have argued that they may be used to distort regulators' perception of public opinion and may lead to agency cynicism about the public comment process.¹¹⁷ Mass comment campaigns often involve many duplicate, or near duplicate, comments.¹¹⁸ Such duplicate comments impose various real costs on agencies without adding new substantive content to the rulemaking record.¹¹⁹ The expert consensus that the public comment process is "not a vote," appears to conflict with "widely held views among participating individuals, advocacy groups, and journalists that the public expression of preferences should and does carry some weight, entirely apart from whatever substantive justification for those preferences is offered."¹²⁰ Cynthia Farina argues that "powerful cultural patterns," including "the popular equation in the United States of democratic voice with casting a vote," reinforce this "plebiscite assumption."¹²¹ The conflict between public and expert perception could lead to some commenters operating under a false understanding of the weight that will be given to their views.

117. Sara R. Jordan & K. Lee Watson, *Reexamining Rulemaking in an Era of Internet-Enabled Participation*, 42 PUB. PERFORMANCE & MGMT. REV. 836, 856 (2019) ("At the level of regulatory politics, manufactured salience is the generation by politically or economically motivated actors of a large number of comments . . . in order to alter the perceptions of regulators' ascribed level of salience of a position on a rule."); David Schlosberg, Steve Zavestoski & Stuart Shulman, *Deliberation in E-Rulemaking? The Problem of Mass Participation*, in ONLINE DELIBERATION: DESIGN, RESEARCH, AND PRACTICE 133, 143 (Todd Davies & Seeta Peña Gangadharan eds., 2009) ("Interviews with agency rule writers show that agencies do not value and often openly resent form letters. The EPA, in fact, simply prints and stores an inaccessible hard copy of all but one example of each identical or similar mass email."); Stuart W. Shulman, *The Internet Still Might (But Probably Won't) Change Everything*, 1 I/S 111, 111–12 (2005) (raising concern that agency personnel would become cynical about mass comment campaigns).

118. Stuart W. Shulman, *Whither Deliberation? Mass E-Mail Campaigns and U.S. Regulatory Rulemaking*, 3 J. E-GOV'T 41, 58 (2006) (finding that a very small percentage of mass campaign-generated comments include unique substantive information); see also Cary Coglianese, *Citizen Participation in Rulemaking: Past, Present, and Future*, 55 DUKE L.J. 943, 952–59 (2006) (raising concern that e-rulemaking will increase number of comments but not range of viewpoints).

119. Benjamin, *supra* note 64, at 904–05 (discussing costs associated with duplicative comments); see also Jeffrey S. Lubbers, *A Survey of Federal Agency Rulemakers' Attitudes About E-Rulemaking*, 62 ADMIN. L. REV. 451, 465–66 (2010) (describing a survey of officials involved in rulemaking that found a widespread view that e-rulemaking increased total amount of participation but that there was rarely useful information or new arguments in the additional comments).

120. Livermore, Eidelman & Grom, *supra* note 18, at 991–92.

121. Cynthia R. Farina, Mary J. Newhart, Claire Cardie, Dan Cosley & CeRI, *Rulemaking 2.0*, 65 U. MIAMI L. REV. 395, 431 (2011).

The interviews provided a variety of perspectives concerning how agencies respond to mass comment campaigns and to expressions of opinion contained in public comments more generally. The agency officials that we interviewed were uniform in their position that the notice-and-comment process is not a vote (i.e., agencies do not tabulate comments “pro” and “anti” and then choose the more popular position), but they have a wide array of approaches to addressing opinions expressed in comments. Specifically, there seem to be three approaches taken by different agencies: (a) opinions expressed in comments are irrelevant—only the factual content matters; (b) opinions expressed in comments are relevant to the political perception of the rule and may affect agencies’ activities on the Hill, color how agency leadership thinks about the viability of a proposed rule, or affect how agencies roll out a rule if there is significant opposition; and (c) opinions expressed in comments are relevant insofar as they express popular sentiment, and agency decisionmakers (especially agency leadership) may consider that in deciding how to proceed, though it should never be the sole factor in deciding whether to pursue a particular policy.

Some agencies appear not to track the overall number of comments received or the number of times a particular comment was received. Agencies are well aware that organizations orchestrate mass comment campaigns, and it is obvious that these campaigns will affect the comments the agency receives. Some of the agency personnel we interviewed viewed the opinions expressed in mass comment campaigns as mostly amounting to statements of preference.

C. *Technological Responses to Mass Comments*

Technologies have emerged that help agencies grapple with the large quantities of duplicative comments that can result from mass or computer-generated comment campaigns.¹²² Submissions in response to mass comment campaigns often include many duplicate comments, which existing software can easily identify. The most important, relevant software is known as “de-duplication” (or “de-duping”) software. A de-duping program is software that scans each comment and then compares it to every other comment that the agency has received.¹²³ The program will then identify

122. See Shulman, *supra* note 117, at 116.

123. A de-duping program can, of course, only process comments that are in electronic form. With respect to paper comment submissions, an agency may, in theory, scan the comments and then use an optical character recognition (OCR) program to convert the file into an electronic form. See *What is Optical Character Recognition (OCR) Technology Software?*, HYLAND, <https://www.hyland.com/en/resources/terminology/data-capture/what-is-optical-character-recognition-ocr> (last accessed Feb. 19, 2022) (describing OCR and how it can convert paper submissions to electronic forms). The electronic version can then be run

the degree of overlap between each of the comments and group those comments that appear to derive from a common source.¹²⁴ For instance, the program could flag a comment longer than a few words and with content that is 90% or more identical to another comment. In these situations, it may be safe to assume either the submitters coordinated with each other when preparing their comments or that they both used a common source document that one or both of them slightly modified (or, as discussed below, that the comment was computer-generated).¹²⁵ This pattern arises when an organization has supplied text to its members and urged them to either submit the comment verbatim or modify it slightly so that each comment is largely, if not entirely, identical.¹²⁶

As discussed in our interviews, de-duping programs allow the agency to set the threshold at which a comment is flagged as likely being part of a mass comment campaign. For instance, if the agency sets the threshold at 90% identity, any comment that has 90% or more of overlapping content will be grouped with other such comments; any comment that is less than 90% identical will not. De-duping software only focuses on the actual words in each document and the order in which they appear.¹²⁷ For example, if a submitter took a form comment and changed most of the words to synonyms (e.g., “happy” to “glad”), the de-duping program would not recognize the comment as being duplicative.

By batching identical and nearly identical comments in this way, de-duping software greatly reduces an agency’s burden in processing comments in rulemakings involving mass comment campaigns. For example, consider the following hypothetical scenario. An agency issues a proposed rulemaking regulating Issue XYZ. Organization ABC supports the rule. ABC sends an email to its members with a request to submit a public comment in support of the rule to Regulations.gov. The email includes a four-paragraph sample comment and asks that the commenters include a sentence or two that explains how Issue XYZ relates to them. Sixty thousand members file a comment, and about half of them add the extra sentence or two. Organization LMN opposes the rule and also sends out an email to its members, providing them with draft

through a de-duping program. The integrity of the OCR process depends upon the quality of the underlying physical document.

124. See Shulman, *supra* note 104, at 38.

125. See discussion *infra* Part V.

126. See David A. Karpf, *Online Political Mobilization from the Advocacy Group’s Perspective: Looking Beyond Clicktivism*, 2 POL’Y & INTERNET 1, 4 (2010).

127. Ryan Basques, *A Layman’s Guide to Fuzzy Document Deduplication*, VARIABLE (Jan. 16, 2020), <https://towardsdatascience.com/a-laymans-guide-to-fuzzy-document-deduplication-a3b3cf9a05a7> (explaining that de-duping software only searches for 100% similarities, allowing campaigns to side-step being caught by changing a few words).

text to submit in opposition to the rule and encouraging them to explain precisely how the regulation would harm them. Two hundred members file a comment. Of these filers, 100 submit LMN's text verbatim, eighty reproduce that text and add a sentence or two on how the regulation will hurt them, and twenty reproduce the comment and provide an extensive analysis on exactly how the regulation would cause a specific set of harms.

When the agency processes the comments received, the de-duping software will immediately identify these two separate campaigns and batch the comments. For the ABC campaign, it can simply ignore the 30,000 comments that are 100% identical. Rereading the same text 30,000 times would be an extravagant waste of time and taxpayer dollars and contribute no new information to enhance the rule-writing process. And the software can make short work of the other 30,000 nearly identical comments. After the de-duping program has identified the comments as deriving from a common source, an agency official can simply take a quick look at the added language in each comment and decide if it adds substantive new information.

The process for the LMN campaign is slightly more complicated. The 100 identical comments can be ignored, and the eighty nearly identical comments can be quickly processed, assuming the added sentences contain little by way of empirical data. For the twenty comments that contain extensive additional information, the agency will need to spend more time with each one. Indeed, they may not even be flagged by the de-duping software, depending on the extent of the changes (e.g., if the submitter pastes in a 500-word comment and then adds 500 additional words, the de-duping program will not flag the comment unless it is set at 50% overlap or lower). This simple example illustrates two key points. First, de-duping software can massively decrease the processing burden for agencies. Second, unique or partially unique comments are much more challenging for agencies to process than identical or very nearly identical comments. For the latter, de-duping software can reduce the marginal processing time for each iteration of a mass comment to zero (if the comments are identical) or close to zero (if the comments are almost identical). Such de-duplication software has existed for well over a decade.¹²⁸

128. See Shulman, *supra* note 117, at 124 (exploring the software's application in rulemaking in 2009). Our interviews suggested that today most agencies use some sort of de-duplication tool, though there is significant variation in how they do so. First, some agencies use a tool that, up until recently, was built into Federal Docket Management System, the federal toolkit for searching, viewing, downloading, and reviewing comments on proposed federal rules. Others have their own program, others use contractors that have de-duplication programs, and still others allow individual comment processors to use de-duplication tools but do not have any agency-wide prescribed tool.

Our interviews suggested that today most agencies use some sort of de-duplication tool, though there is significant variation in how they do so. First, some agencies use a tool that, up until recently, was built into FDMS, the federal toolkit for searching, viewing, downloading, and reviewing comments on proposed federal rules. Others have their own program, others use contractors that have de-duplication programs, and still others allow individual comment processors to use de-duplication tools but do not have any agency-wide prescribed tool.

While software makes it easy to spot identical or near-identical comments, agencies still need to set the policies by which they decide how much overlap must exist between comments before they qualify as being part of a mass comment campaign (and therefore do not review them). De-duplication programs let an agency set the level of overlap (e.g., 90%), and different agencies use different thresholds, though none appears to require 100% overlap for something to qualify as being part of a mass comment campaign.

To the extent that a participant in a mass comment campaign adds unique information (e.g., submits the organizer's form comment but then adds a sentence saying "I am personally supportive of this rule because . . ."), agencies generally review the unique information, even if the identical content is batched and treated as a group. Some agencies do not post all iterations of comments received on Regulations.gov if they qualify as being part of a mass comment campaign. For instance, certain agencies just post a representative example.

IV. MALATTRIBUTED COMMENTS

Malattributed comments differ from mass and computer-generated comments in two critical ways that raise particular legal and policy issues. First, malattributed comments involve a direct falsehood; the submitter makes an assertion about its identity that is untrue. Second, they may cause harm not just to the notice-and-comment process, but to some individuals outside that process, namely, those whose names have been used. Some have gone so far as to characterize malattributed comments as a form of identity theft.¹²⁹ In this section we examine these and other claims.

A. Legal Issues Raised by Malattributed Comments

Two sorts of legal issues arise with regard to malattributed comments. First, many people might assume, and some have asserted, that submitting a

129. See, e.g., Press Release, Fed. Commc'ns Comm'n, Statement of Commissioner Jessica Rosenworcel on Identity Theft Affecting Two Million Americans in FCC Record (Dec. 13, 2007), <https://docs.fcc.gov/public/attachments/DOC-348238A1.pdf>.

malattributed comment is illegal, indeed criminal.¹³⁰ Several members of Congress have requested that the Department of Justice undertake criminal investigations and prosecutions.¹³¹ In addition, at least two state Attorneys General launched criminal investigations into the FCC net neutrality rulemaking.¹³² The common phrase “fraudulent comment” is an assertion that the submitter has violated the law. However, some of this rhetoric may have gotten out ahead of legal realities.

Whether this activity constitutes a crime is central to the appropriate agency response for three reasons. First, if it is criminal, then one important federal response would be prosecution, and it would be incumbent on the agency to refer significant examples to the Department of Justice.¹³³ Second, if the activity is criminal, then the agency has a stronger obligation to discourage or prevent it than would be the case if it is problematic but unregulated. And third, if this is criminal activity, that signals a societal judgment that the problem here is serious indeed.

130. *See, e.g.*, In the Matters of Nicholas Confessore, 33 FCC Rcd. 11808 (2018); *id.* at 11821 (Rosenworcel, Comm’r, dissenting) (noting that in the net neutrality rulemaking millions of “people had their identities stolen and used to file fake comments, which is a crime under both federal and state laws”); Catherine Sandoval, Reply Comments, In the Matter of Restoring Internet Freedom, FCC 17-60, at 8 (Aug. 30, 2017) (“False filings based on stolen identities are neither anonymous speech, nor protected speech; they constitute federal and state crimes.”).

131. Press Release, H. Comm. on Energy & Com., Pallone to Department & FBI: Investigate Fake FCC Net Neutrality Docket Comments (June 28, 2017), <https://energycommerce.house.gov/newsroom/press-releases/pallone-to-justice-department-fbi-investigate-fake-fcc-net-neutrality-docket>. The authors have not seen evidence of Department of Justice action on these requests.

132. Press Release, NY State Off. Att’y Gen., Attorney General James Issues Report Detailing Millions of Fake Comments, Revealing Secret Campaign to Influence FCC’s 2017 Repeal of Net Neutrality Rules (May 6, 2021), <https://ag.ny.gov/press-release/2021/attorney-general-james-issues-report-detailing-millions-fake-comments-revealing>.

133. Indeed, the Permanent Subcommittee on Investigations report lamented that: Only one agency contacted by the Subcommittee—the Commodity Futures Trading Commission (CFTC)—said that it had referred suspicious activity to the Federal Bureau of Investigation (FBI). Other agencies, including the Consumer Financial Protection Bureau, the Department of Labor, and the FCC, all were aware of comments submitted under false identities regarding their rules, but took little action to address them.

Joint Hearing Subcommittee Report, supra note 12, at 2. In addition, it may be unlikely that the Department of Justice will undertake criminal prosecutions in this space. *See* Matthew Miner, Vice Chairman and Executive Director Administrative Conference of the U.S., Remarks at the Administrative Conference of the United States and Administrative Law Review Symposium on Mass and Fake Comments in Agency Rulemaking (Oct. 5, 2018), at 131–33.

The second set of legal issues arises under the APA.¹³⁴ Here, the question is whether the APA requires an agency to rely on malattributed comments, forbids it to do so, or just has nothing to say on the matter.

Our role is not to reach definitive legal conclusions, particularly as the directly relevant caselaw is non-existent. Rather, we flag the critical questions that agencies and prosecutors must confront.

1. *Criminal Prohibitions*

A number of possible criminal prohibitions might conceivably apply to malattributed comments—fraud, making false statements, computer crime, and identity theft.¹³⁵ The following discussion touches on the two theories that seem most frequently mentioned.

a. *Fraud*

The standard definition of fraud has five elements:

- (1) a false statement of a material fact, (2) knowledge on the part of the defendant that the statement is untrue, (3) intent on the part of the defendant to deceive the alleged victim, (4) justifiable reliance by the alleged victim on the statement, and (5) injury to the alleged victim as a result.¹³⁶

Malattributed comments clearly meet some elements of this definition—for example, they involve a false statement of fact. But several elements raise real issues. First, the alleged defrauded party is the agency. But it will be rare that an agency will “rely on” the false identity set out in a comment. For run of the mill comments, agencies do not “rely on” the identity of the commenter; they consider it irrelevant and so ignore it. In general, there will be nothing to rely on; reading a comment that purports to be from “John Smith,”¹³⁷ how *could* the agency “rely on” it really being from John Smith.

134. 5 U.S.C. §§ 551–559, 561–570a, 701–706.

135. Possibly relevant federal statutes include 18 U.S.C. § 1341 (mail fraud); 18 U.S.C. § 1343 (wire fraud); 18 U.S.C. § 1037 (email fraud); 18 U.S.C. § 1030 (Computer Fraud and Abuse Act); 18 U.S.C. § 371 (conspiracy to defraud the United States); 18 U.S.C. § 1505 (obstructing agency proceedings); 18 U.S.C. § 1001 (making false statements “in any matter within the jurisdiction of the executive . . . branch”); and 18 U.S.C. §§ 1028, 1028A (identity theft). For a full, and skeptical, discussion of the possible applicability of these provisions, see Herz, *supra* note 50, at 33–55.

136. Herz, *supra* note 50, at 34.

137. As 3,997 submissions in the Net Neutrality rulemaking were. Hitlin, Olmstead & Toor, *supra* note 5, at 4.

Where the false identity is recognizable (Barack Obama, Elvis Presley, a well-known NGO), then it is possible that the agency could conceivably rely on the putative identity of the submitter, taking it more or less seriously in light of its source.¹³⁸ But it will not do so because it will recognize the falsehood. Finally, if the submitter claims to be someone with relevant personal experience, then (a) the relevant falsehood is not the *name* but the content of the submission, and (b) it would not be reasonable for the agency to meaningfully rely on such assertions without further investigation or confirmation.

For similar reasons, it could be difficult to satisfy the fifth prong, actual injury to the defrauded party.¹³⁹ A loss of public confidence in the rulemaking process is arguably an injury to the agency, but not the sort of tangible harm to person or property that fraud generally requires. Finally, fraud requires that the false statement of fact be *material*. Again, if the actual identity of the commenter does not matter, which is often the case, then a malattribution is not material.

The analysis is similar under the various federal fraud statutes, of which there are many. Submission of a comment will almost always involve the use of a wire or of the mails, thus coming within the ambit of the wire fraud¹⁴⁰ and mail fraud statutes.¹⁴¹ But both of these statutes require that the perpetrator be attempting to obtain “money or property” from the defrauded party. Even if there is an ultimate financial interest, someone attempting to influence agency policymaking is not trying to obtain money from the *agency*.¹⁴²

There is one specific fraud provision that in some circumstances might reach malattributed comments. For a century and a half, federal law has made it a crime to conspire to defraud the United States.¹⁴³ The current version, 18 U.S.C. § 371, makes it a crime to “conspire either to commit any offense against the United States, or to *defraud* the United States, or any agency thereof in any manner or for any purpose” The courts have read the italicized language broadly, going beyond common-law fraud and extending to “any conspiracy for the purpose of impairing, obstructing, or defeating the

138. Herz, *supra* note 50, at 34.

139. *Id.*

140. 18 U.S.C. § 1343.

141. *Id.* § 1341.

142. See *Cleveland v. United States*, 531 U.S. 12, 26–27 (2000) (concluding “that § 1341 requires the object of the fraud to be ‘property’ in the victim’s hands” and that a state license does not qualify). If the effort to get the government to give the supposed fraudster a license is not an attempt to obtain money or property, an effort to get the government to adopt a particular regulation is not a fortiori. See Herz, *supra* note 50, at 37–39.

143. See Act of March 2, 1867, ch. 169, § 30, 14 Stat. 484 (prohibiting conspiracy to “defraud the United States in any manner whatever”).

lawful function of any department of Government.”¹⁴⁴ There still needs to be some sort of trick or deceit, but using false identities could be such. If the submitter is attempting to influence the final decision by making the agency think, for example, that a raft of non-existent individuals support a particular outcome, the submission can be seen as an attempt to impair the lawful functions of the agency. Even if it is unlikely to succeed in doing so, that failure is irrelevant to the existence of a conspiracy to impair, obstruct, or defeat lawful functions.¹⁴⁵ And if the agency *is* influenced by false information in a submission, its functions have been impeded or impaired in the sense that it failed to reach the “right” result. Furthermore, submission of a huge number of comments—whether malattributed or not—with the purpose of slowing down the agency could perhaps be understood as an effort to “obstruct.”¹⁴⁶

On the other hand, this setting is quite different than those in which prosecutions under 18 U.S.C. § 371 are generally brought. These prosecutions—so-called “*Klein* conspiracies”—are most common in tax cases;¹⁴⁷ they also arise where there is a legal obligation to disclose information that a private party has withheld.¹⁴⁸ Such conspiracies directly obstruct agency activities in a way that phony names on comments do not. Additionally, the difficulty of showing substantial harm to the federal government or an agency will disincline any prosecutor to pursue such a case. Finally, the charge here is conspiracy, not fraud, so the usual elements of conspiracy would have to be shown.

b. Making False Statements

Moving away from fraud-based crimes, the obvious basis for a possible prosecution is the prohibition on knowingly or willfully making “false, fictitious, or fraudulent” statements to a federal agency found at 18 U.S.C. § 1001. This is a sweeping prohibition; unlike fraud, it does not require a showing of financial or property loss to the government or reliance by the government.¹⁴⁹ Most elements of the crime seem satisfied here.

144. *Haas v. Henkel*, 216 U.S. 462, 479 (1910) (upholding convictions under this provision where the defendants had submitted false information to the Department of Agriculture, thereby skewing its published statistics).

145. *Id.* at 479–80; 18 U.S.C. § 371.

146. *Hass v. Henkel*, 216 U.S. at 479.

147. *See* U.S. Dep’t of Just., *Crim. Tax Manual* § 23.07[2] (2021).

148. *See* *United States v. Murphy*, 809 F.2d 1427, 1431–32 (9th Cir. 1987) (“Where the regulations implementing the Act [administered by the agency] do not impose a duty to disclose information, failure to disclose is not conspiracy to defraud the government.”).

149. *See* *United States v. Richmond*, 700 F.2d 1183, 1188 (8th Cir. 1983); *United States v. Lichenstein*, 610 F.2d 1272, 1278 (5th Cir. 1980).

Though not “fraudulent,” a malattributed comment does make a “false” and “fictitious” “statement or representation” in asserting that it is submitted by someone other than the actual submitter.

The falsehood is knowing or willful. It is true that whoever is programming the computer or authorizing the submissions does not know of each specific misidentification, but that person does know that the misidentifications are being made.

A notice-and-comment rulemaking would seem to be “a matter within the jurisdiction” of the agency conducting the rulemaking.¹⁵⁰

One issue remains: the false statement has to be *material*, meaning it “has a natural tendency to influence, or [is] capable of influencing, the decision of the decisionmaking body to which it was addressed.”¹⁵¹ Use of a false name is not “material” unless the effect or influence of a comment hinges on who submitted it. If the agency is taking account only of the content of the comment, not the identity of its author, then the malattribution seems immaterial. Using random names from the phone book to misidentify the source of a comment would in that case not be a *material* misstatement.¹⁵²

A subcategory of malattributed comments could potentially violate 18 U.S.C. § 1001, however. Suppose a comment falsely claims to be from someone with extensive relevant expertise and experience—a Ph.D. research chemist, a twenty-year line employee in the relevant industry, a user of a product the agency proposes to ban, the owner or renter of property in the neighborhood of a regulated facility. Because the person’s supposed unique, relevant experience would give the comment more weight, that misstatement would be material. And *if* simply by using a particular person’s name that information about background could be communicated, then just the false name could be material.

It seems likely that such comments have been filed in federal agency rulemakings, though instances would be hard to identify. A recent SEC rulemaking does provide an example, though it arose prior to, rather than in comments on, the issuance of a proposed rule. In 2018, the SEC held a roundtable regarding proxy rules and invited follow-up submissions, of which it received several hundred.¹⁵³ In announcing the proposed rule, the

150. Compare Herz, *supra* note 50, at 34, with 18 U.S.C. § 1001 (demonstrating reliance is required for the elements of fraud-based crimes, but not the crime of making false, fictitious, or fraudulent statements).

151. Neder v. United States, 527 U.S. 1, 16 (1999) (quoting United States v. Gaudin, 515 U.S. 506, 509 (1995)).

152. See also Miner, *supra* note 133, at 126 (stating that “proving fraud here is hard to do” under the materiality requirement in 18 U.S.C. § 1001).

153. Statement of Jay Clayton, SEC Chairman, at Open Meeting on Proposals to Enhance the Accuracy, Transparency and Effectiveness of Our Proxy Voting System

Commission Chair, Jay Clayton, invoked several of these:

Some of the letters that struck me the most came from long-term Main Street investors, including an Army veteran and a Marine veteran, a police officer, a retired teacher, a public servant, a single Mom, a couple of retirees who saved for retirement, all of whom expressed concerns about the current proxy process.¹⁵⁴

Later reporting put those letters in a different light. All had been assembled, organized, and written by an industry group funded by supporters of the SEC proposal.¹⁵⁵ The retired teacher did sign her letter but had not written it; the veterans were the brother and cousin of the chair of the industry group; the single mom did not write her letter; the retired couple were the in-laws of the head of the industry group and when contacted had no recollection of ever writing any such letter; the public servant reported that she had been contacted by a public affairs firm, that she did not know what a proxy adviser is, and “[t]hey wrote [the letter], and I allowed them to use my name after I read it. I didn’t go digging into all of this.”¹⁵⁶

Whether the reporting is accurate, and whether any of this violated 18 U.S.C. § 1001, the incident does flag the possibility of bespoke comments that make material misstatements. Those may or may not include the *name* of the submitter. The sort of malattributed comments that have generated attention and concern to date are quite different. They are duplicative and generic, make no representations as to background or expertise, and do not use recognizable names of experts.

Finally, one of the ways in which malattributed comments can be misleading, as we discuss below, is that they make it appear that more commenters hold a particular view than is the case.¹⁵⁷ A malattribution could perhaps be a false statement that is material not because the agency cares who submitted the comment but because it cares that *someone* did. This theory turns on the complicated question, discussed above, of whether and how an agency should give weight to the number of comments taking a particular position.¹⁵⁸

(Nov. 5, 2019), <https://www.sec.gov/news/public-statement/statement-clayton-2019-11-05-open-meeting>.

154. *Id.*

155. Zachary Mider & Ben Elgin, *SEC Chairman Cites Fishy Letters in Support of Policy Change*, BLOOMBERG (Nov. 19, 2019, 10:03 AM), <https://www.bloomberg.com/news/articles/2019-11-19/sec-chairman-cites-fishy-letters-in-support-of-policy-change>.

156. *Id.* All in all, the interest group got about two-dozen people with connections to the organization to submit letters. *Id.* The group’s president insisted, by the way, that his mother-and father-in-law *had* known about the letter they supposedly submitted: “They are 80-some-years-old . . . This happened months ago. I’m sure it’s not top of their minds.” *Id.*

157. *See infra* Section IV.B.1. This is true of large-scale, computer-generated comments generally; most malattributed comments are just an example of that phenomenon in which the computer has attached a random name to the comment.

158. *See supra* Section III.B.

2. *The Administrative Procedure Act*

Two separate issues arise under the APA. First, some have argued that it violates the APA for agencies to accept malattributed comments and/or fail to remove them from the docket.¹⁵⁹ Put most strongly, the argument is that if there are a significant number of malattributed comments in the docket the rulemaking is fatally tainted and must be abandoned. Presumably, on this reading, the APA imposes an affirmative duty on agencies to prohibit submission of malattributed comments and to police that prohibition conscientiously. The second argument is the opposite; it holds that agencies have an obligation to accept malattributed comments and to give them whatever weight they deserve.¹⁶⁰ On this reading, it would violate the APA to do exactly what the first reading says the APA requires.

Of course, it could be that both of these readings are mistaken, and the APA is silent on this matter. On this understanding, an agency could prohibit their submission and refuse to consider them; but it could also instead choose to consider them along with all the other comments they receive, giving each whatever weight it is due.

a. An Obligation to Accept and Consider Malattributed Comments?

The APA requires agencies not just to accept but also to *consider* comments.¹⁶¹ Courts have broadened this obligation by requiring that when issuing a final rule, agencies respond to all significant comments.¹⁶² Arguably, these obligations extend to malattributed comments just like any other comment. To be sure, an agency will frequently conclude that the comment does not require a response,¹⁶³ and its malattribution, if detected, could be one factor supporting that conclusion.¹⁶⁴ But under one reading, the APA would require that an agency accept, review, and, if there is something important and substantive in the comment, consider and respond

159. *See infra* Section IV.A.2(b).

160. *See infra* Section IV.A.2(a).

161. 5 U.S.C. § 553 (providing that agency shall issue a final rule “[a]fter consideration of the relevant matter presented . . .”).

162. *See, e.g.*, *Del. Dep’t of Nat. Res. & Env’t Control v. EPA*, 785 F.3d 1, 15 (D.C. Cir. 2015); *Cement Kiln Recycling Coal. v. EPA*, 493 F.3d 207, 225–26 (D.C. Cir. 2007); *Grand Canyon Air Tour Coal. v. FAA*, 154 F.3d 455, 468 (D.C. Cir. 1998).

163. *See Thompson v. Clark*, 741 F.2d 401, 408 (D.C. Cir. 1984) (explaining that Administrative Procedure Act (APA) Section 553(c) “has never been interpreted to require the agency to respond to every comment . . . no matter how insubstantial.”).

164. *Cf. Mendelson, Rulemaking, Democracy, supra* note 62, at 1378 (noting that an agency could “announc[e] that anonymous comments will receive less weight, particularly when such comments purport to be informed by an individual’s own experience”).

to a malattributed comment just like any other comment. And if that is true, agencies could not prohibit submission of malattributed comments or remove malattributed comments from the docket.

On the other hand, agencies are unquestionably free to impose reasonable requirements on the form and content of public comments.¹⁶⁵ The most obvious example is that notice-and-comment rulemaking always includes a comment deadline.¹⁶⁶ An agency might consider late-filed comments—different agencies have different practices.¹⁶⁷ But it is universally accepted that an agency can ignore a late-filed comment simply because it is a late-filed comment.¹⁶⁸ To take a more directly relevant example, agencies can—and many do—prohibit anonymous comments.¹⁶⁹ Prior ACUS recommendations have not taken a position on whether agencies should or should not accept anonymous comments, but one recommendation urges each agency to set a clear public policy.¹⁷⁰ The premise of this recommendation, of course, is that it is up to the agency whether it will accept or reject anonymous comments. And if that is the case with regard to anonymous comments, then it would seem to be the case for malattributed comments.

The foregoing assumes that an agency has a clearly stated policy regarding the permissibility of malattributed comments. In the absence of a policy stating that the agency will not consider such comments, the argument that the agency *must* consider such submissions is more plausible.

165. See Dooling, *supra* note 84, at 905–15 (discussing such requirements, including civility and not revealing confidential information) (citation omitted).

166. See JEFFREY S. LUBBERS, A GUIDE TO FEDERAL AGENCY RULEMAKING 279 (4th ed. 2006); OFFICE OF THE FEDERAL REGISTER, A GUIDE TO THE RULEMAKING PROCESS 5 (2011).

167. LUBBERS, *supra* note 166.

168. See, e.g., *Mont. Sulphur & Chem. Co. v. EPA*, 666 F.3d 1174, 1195–96 n.12 (9th Cir. 2012) (“[T]he EPA was not required to consider these untimely comments”) (citation omitted); *Reyblatt v. U.S. Nuclear Regul. Comm’n*, 105 F.3d 715, 723 (D.C. Cir. 1997) (concluding that agency need not respond to late comments even if it had indicated that it would consider them); *Bd. of Regents of the Univ. of Wash. v. EPA*, 86 F.3d 1214, 1221–22 (D.C. Cir. 1996); LUBBERS, *supra* note 166, at 279.

169. In a 2011 Administrative Conference of the United States (ACUS) report on agency practices regarding public comments, Professor Balla found that of the twenty-five agencies he studied, fifteen (including EPA and several components of the Department of Transportation) allowed anonymous comments and ten (including the FCC, Securities and Exchange Commission, and Federal Reserve) required commenters to identify themselves. See Steven J. Balla, *Public Commenting on Federal Agency Regulations: Research on Current Practices and Recommendations to the Administrative Conference of the United States* 22–23 (Mar. 15, 2011) (draft report to the Admin. Conf. of the U.S.), <https://www.acus.gov/sites/default/files/COR-Balla-Report-Circulated.pdf>.

170. *Adoption of Recommendations*, 76 Fed. Reg. 48,789, 48,791 (proposed Aug. 9, 2011) (“The eRulemaking Project Management Office and individual agencies should establish and publish policies regarding the submission of anonymous comments.”).

b. *An Obligation to “Cleanse” the Docket of Malattributed Comments?*

The opposite argument would be that the APA *prohibits* agencies from considering malattributed comments, or even that it imposes an affirmative obligation to weed them from the docket. Such a claim was made by many observers regarding the net neutrality rulemaking.¹⁷¹

In general, if a comment makes no contribution, the agency does not reject it, it just ignores it.¹⁷² This makes sense. Removing useless comments would require effort, would be inconsistent with the public’s opportunity to comment in the first place, and would make it impossible for a reviewing court to review the full record and determine, among other things, whether the agency had in fact considered and responded to all significant comments.¹⁷³ If an agency must purge the docket of malattributed comments, that must be because their mere presence in the docket causes affirmative harm that irrelevant or pointless comments do not. It

171. See, e.g., Klint Finley, *FCC’s Broken Comments System Could Help Doom Net Neutrality*, WIRED (Sept. 2, 2017), <https://www.wired.com/story/fccs-broken-comments-system-could-help-doom-net-neutrality> (quoting Gigi Sohn as stating that the agency might have an obligation under the APA to remove fake comments from the docket and that “[a]t a bare minimum, they should investigate these comments and if they can’t actually remove the comments, they can and should disregard them as part of their consideration of record”); Letter from Ellen F. Rosenblum, Xavier Becerra, Matthew Denn, Karl A. Racine, Douglas S. Chin, Lisa Madigan et al. to FCC 1, 1–2 (Dec. 13, 2017), https://www.doj.state.or.us/wp-content/uploads/2017/12/ag_letter_12-13-2017.pdf (including eighteen state Attorneys General urging the FCC to delay action because “the well of public comment has been poisoned by falsified submissions,” which makes it impossible to “listen to the public” as the APA requires); Letter from Allen S. Hammond, IV & Catherine J.K. Sandoval to Sen. Roger Wicker et al. (Dec. 13, 2017) <http://1x937u16qcralvnejt2hj4jl-wpengine.netdna-ssl.com/wp-content/uploads/BBIC-Letter-re-false-comments-and-paid-priority-final-Sandoval-and-Hammond.pdf> (“The FCC’s apparent tolerance of allegedly criminal behavior in its comment process [in the form of acceptance of malattributed comments] falls far below the required standard of reasoned decisionmaking under the Administrative Procedures [sic] Act.”) (citation omitted); see also Katherine Krems, Note, *Crowdsourcing, Kind of*, 71 FED. COMM. L.J. 63, 76–77 (2018) (“When there is false information on the record, this information overshadows real public comments that reflect public sentiment and contravenes the APA’s procedures meant to properly inform agencies of public opinion in decision-making processes.”) (citation omitted).

172. Herz, *supra* note 50, at 21 (“Career rule-writers view their broad job as developing sound policy and their narrow job as responding to substantively important comments. Comments that do not require a response are ignored.”).

173. See Dooling, *supra* note 84, at 917–20. Of course, an agency can set reasonable requirements—for example of civility or not revealing confidential information—for comments and police those requirements. *Id.* at 905–15. But comments in violation of those requirements are not merely unhelpful, they do affirmative harm. The affirmative harm from malattributed comments is much less clear, as discussed earlier.

is hard to pin down precisely what this harm would be. The problematic aspect of the comment—the false name—is easily ignored by the agency.¹⁷⁴ If there is a harm under the APA, it would not flow from the malattribution per se, but from legitimate comments being drowned out or misled by the level of actual public support for a particular position. It is not clear that either of those things actually occurs. More particularly, it is not clear that they would occur if the agency is sufficiently aware of the dubious provenance of certain comments to be in a position to purge them from the docket in the first place.

Perhaps the most potentially problematic malattributed comment would be a bespoke, sophisticated comment rather than a mass comment that happens to have a phony name. Consider a comment that purports to come from the General Counsel of a leading industry player or the head of a prominent civil rights organization and reads as if it could be legitimate. Such a “deep fake” comment could sow confusion at the agency and among other commenters and prompt a perceived need among other stakeholders to respond. Because of the impact on other commenters, this is the situation where the argument that the APA requires the agency to remove the comment—assuming it is aware of the malattribution—seems strongest.

No court has considered any issue regarding malattributed comments and the APA, even when such a challenge could have been raised. When the FCC issued its final net neutrality order, opponents promised that they would challenge the order in court on grounds related to the malattributed comments.¹⁷⁵ Several petitions for review asserted that one of the order’s legal defects was that it “conflicts with the notice-and-comment requirements of 5 U.S.C. § 553,”¹⁷⁶ but no party actually raised the issue of malattributed comments to the court during briefing.¹⁷⁷

174. Some of the objections to the presence of malattributed comments in the rulemaking docket rest not on the fact that the comments bear an incorrect name but that they are computer-generated or fake mass comments—what looks like submissions from thousands of people is in fact from only one—and therefore misleading with regard to public sentiment.

175. See, e.g., Brian Fung, *FCC Net Neutrality Process ‘Corrupted’ by Fake Comments and Vanishing Consumer Complaints, Officials Say*, WASH. POST: THE SWITCH (Nov. 24, 2017), <https://www.washingtonpost.com/news/the-switch/wp/2017/11/24/fcc-net-neutrality-process-corrupted-by-fake-comments-and-vanishing-consumer-complaints-officials-say/> (quoting Evan Greer of Fight for the Future as stating that “this will absolutely show up in court if we get there”); see also Karl Bode, *The FCC Is Blocking a Law Enforcement Investigation Into Net Neutrality Comment Fraud*, VICE (Dec. 12, 2017), https://www.vice.com/en_us/article/wjzjv9/net-neutrality-fraud-ny-attorney-general-investigation (“Expect the agency’s failure to police comment fraud to play a starring role in these legal arguments to come.”).

176. Petition for Review at 2, *Ctr. for Democracy & Tech. v. FCC* (D.C. Cir. 2018) (No. 18-1068); Petition for Review at 2, *New York v. FCC* (D.C. Cir. 2018) (No. 18-1055).

177. The D.C. Circuit’s opinion, which was largely but not entirely in the agency’s favor, does not

c. Agency Reliance on Malattributed Comments

The final question is whether it would violate the APA for an agency to read or to rely on a comment submitted under a false name. The rulemaking provision itself, § 553, in no way restricts what the agency can consider or who it can listen to. Rather, any such restriction would rest on the requirement of “reasoned decisionmaking” embedded in the prohibition on arbitrary and capricious agency action.¹⁷⁸ Such determinations are case-specific. It would not be reasoned decisionmaking to rely on malattributed comments as a measure of public sentiment or to rely on a comment that purported to be from an authority in a relevant field when it was not. But if a comment is relevant, factually accurate, and communicates something of value, there is nothing arbitrary and capricious in an agency making use of what it has to offer, regardless of whether the sender put someone else’s name on it. Thus, there would seem to be no per se rule allowing agencies to rely or prohibiting agencies from relying on malattributed comments.

B. Policy Issues Raised By Malattributed Comments

In this section, we elaborate on the concerns raised by malattributed comments, discuss how agencies can discourage submission of malattributed comments, and consider how they can handle malattributed comments once they are discovered. At the same time, we acknowledge that a malattributed comment may nevertheless contain useful content.

1. Misleading the Agency

Because malattributed comments, by definition, contain a falsehood, an obvious concern is that the agency may be misled. The misleading might take either of two forms: (a) the agency could be misled about the identity of the commenter and (b) the agency might be misled as to public opinion, mistakenly viewing the phony comments as indicators of broader public support for a particular position than actually exists.¹⁷⁹

a. Commenter Identity

Concerning the first, in general, the agency simply will not notice the name of the commenter. If the agency receives 10,000 very similar, computer-generated comments, no one is paying attention to the names under which they are submitted, whether they are false or real. One cannot

mention the malattributed comments issue. *See* *Mozilla Corp. v. FCC*, 940 F.3d 1 (D.C. Cir. 2019).

178. *See* 5 U.S.C. § 706(2)(a).

179. *See* Herz, *supra* note 50, at 22–23.

be misled by something of which one is unaware. If the submission is not computer-generated—a unique comment filed under a false name—the falsehood is irrelevant for purposes of the agency’s deliberation. The agency will take the comment for what it is worth; the name adds nothing to its weight and will not affect how it is treated.¹⁸⁰

Now suppose the name is one that someone in the agency recognizes. This is the “deep fake” scenario described above. For example, it may be an important researcher or advocate in a relevant field, or the general counsel of a prominent regulated entity. In this situation, the identity of the commenter may matter for the agency’s deliberations. The agency could give particular weight to such a comment, but it would be highly unlikely for the falsehood to go unnoticed. The very background knowledge that makes the name recognizable will make it hard for someone to pull the deception off. This is especially the case in a situation where the purported commenter’s interests are well known to the agency, perhaps because of repeat interaction. However, for an agency that does not regulate often, or that regulates only in certain domains infrequently, this might be harder to ensure.

The malattributions that often grab observers’ attention involve using the name of a famous (sometimes dead) person. But these are not misleading because it is apparent that the name is false. For example, in the net neutrality rulemaking, there were multiple submissions from “Barack Obama” and from “Ajit Pai.”¹⁸¹ This does not result in any actual deception; no rulemaking official would think that the former President or the FCC Chair had submitted the comment. Same for submissions from “Elvis Presley.”

Our discussions with agency officials are consistent with the foregoing. Their own sense is that consequential instances of pseudonymous submissions are extremely rare, if not nonexistent. Of course, we have not done a thorough study and by definition the victim of a successful deception is unaware of having been deceived. Nonetheless, we credit these statements

180. See, e.g., Letter from Ajit Pai, Chairman, FCC, to Rep. Michael E. Capuano (Apr. 12, 2018) (“Despite any suggestion that the public comment process was somehow ‘flawed’ or ‘tampered with’ by the alleged submission of comments under false names, any such activity did not affect the Commission’s actual decision-making”); Letter from Thomas M. Johnson, Jr., Gen. Counsel, FCC, to Eric Schneiderman, Att’y Gen., New York (Dec. 7, 2017) (“[T]he Commission does not make policy decisions merely by tallying the comments on either side of a proposal to determine what position has greater support, nor does it attribute greater weight to comments based on the submitter’s identity.”).

181. See, e.g., FCC, Comment Letter on Notice of Proposed Rulemaking on Restoring Internet Freedom (May 11, 2017), <https://www.fcc.gov/ecfs/filing/1051157755251> (submission from “Barack Obama” of “1600 Pennsylvania Avenue, Washington, DC,” objecting to the “unprecedented regulatory power the Obama Administration imposed on the internet” and “Obama’s . . . power grab”).

because they reflect actual experience, they are consistent with what one would expect, and we are unaware of a single demonstrated instance to the contrary.

There is one possible setting, however, in which the concerns about the agency being misled may be more serious. Suppose a comment is not from a recognizable name but asserts that the submitter has particular experience that appropriately goes to the weight of the comment. For example, the commenter claims to have done research in the area, or to possess “situated knowledge,”¹⁸² or to have had direct personal experience, or to be a person who will be directly regulated or benefitted by the proposed rule. All of those people possess information that members of the general public do not and that the agency may find valuable. They may also have a stake that should counsel caution in taking their assertions at face value. For both reasons, the agency would want to know who the source of the comment is. An anonymous comment that claimed to be from a person in such categories would be somewhat suspect; a signed comment may carry more weight. If the name is a malattribution, and the *actual* submitter does not have the qualifications claimed, there is a real risk of inappropriate reliance on the comment. Moreover, suppose a rule-writer found that comment helpful but wanted to double-check its provenance. An Internet search might reveal the falsehood, but it might reveal nothing, or might appear to confirm the biographical claims made in the comment.

This risk seems real but slim. We are not aware of real-world examples of such submissions. That does not mean they have not occurred. In the real world, the malattributed comments that have gotten attention were duplicative rather than bespoke; they do not make individualized claims about the submitter. In addition, the real problem here is not the malattribution so much as the biographical misrepresentation. The malattribution may make it harder to uncover the relevant falsehood but is not itself misleading. Thus, the problem here is actually the distinct one of accuracy in the assertions within comments. It is entirely possible for commenters submitting under their own name to misrepresent their experiences, expertise, or even views. The SEC proxy rule proceeding is an example.¹⁸³

182. See Cynthia R. Farina, Dmitry Epstein, Josiah Heidt & Mary J. Newhart, *Knowledge in the People: Rethinking “Value” in Public Rulemaking Participation*, 47 WAKE FOREST L. REV. 1185, 1187–88, 1197 (2012) (describing “situated knowledge” as “information about impacts, ambiguities and gaps, enforceability, contributory causes, unintended consequences, etc. that is known by participants because of their lived experience in the complex reality into which the proposed regulation would be introduced”).

183. See *supra* text accompanying notes 154–156.

b. *The Weight of Public Support or Opposition to the Proposed Rule*

The second concern is that the agency will be misled as to public sentiment. Malattributed comments are often, though not necessarily, computer-generated. Such was the case in the net neutrality rulemaking, for example. Millions of individuals did not sit down and prepare comments that they submitted under someone else's name. A handful may have done so, but presumably almost all the malattributed submissions involved a computer taking a prepared text, or writing a text, and then randomly attaching actual names and email addresses to the comment. As with computer-generated comments, part of the objection is that what looks like a set of mass comments submitted by millions of concerned individuals is in fact just the effort of a single submitter. To the extent this is the concern, the *malattribution* is largely irrelevant. Perhaps, however, an agency might think the 100,000 identical comments with different names are more likely to be from different individuals than are 100,000 identical anonymous comments, in which case malattributed computer-generated comments are more misleading. This is especially problematic to the extent that public comments are understood by agencies as providing insight into public sentiment.

2. *Harms to Individuals*

Unlike mass and computer-generated comments, malattributed comments can have impacts outside the agency and the rulemaking process, imposing harms on the people whose names and email addresses are used without permission. Many or most will never be aware that they have supposedly submitted a comment in a federal rulemaking, and many or most may not care. Even if using someone's name and address on a comment does not constitute identity theft under federal law,¹⁸⁴ it still may be harmful to the person whose name is used in this manner.

Two sorts of harms can be imagined. The first is psychological. It would be understandable that a person who learned that their name was used to submit a comment would be annoyed or angry, especially if they disagreed with the content of the comment. The harm is somewhat abstract; unlike standard identity theft, the victim's bank account is intact. But for some people, the distress or anger will be quite real.¹⁸⁵ The second possible harm is reputational. For a malattributed

184. See Herz, *supra* note 50, at 51–55.

185. See, e.g., Letter from Brittany Ainsworth et al., to Ajit Pai, Chairman, FCC (May 25, 2017) (containing claims from twenty-seven individuals whose names and e-mail addresses were used to submit comments without their involvement or permission complaining that someone “stole our names and addresses, publicly exposed our private information without our permission, and used our identities to file a political statement we did not sign onto” and calling on the agency to remove these

comment in a regulatory docket to cause reputational harm, it would have to be noticed by someone who changes their opinion of the purported commenter for the worse. The obscurity of the rulemaking process may make this unlikely, and we are not aware of any instance in which it has occurred. Still, all it takes is one viral tweet by someone with a large following about a comment considered benighted or outrageous to do serious harm to the ostensible author of the comment. Quantifying these harms may well be impossible. Individual views on how seriously to take them will vary. Although some people will not care or perceive themselves to be harmed at all, others may see themselves as victims of identity theft.

3. *Discouraging Malattributed Comments*

The eRulemaking Program has taken several recent steps to discourage the submission of malattributed comments. For example, the user notice on Regulations.gov now includes the following under the heading “Terms of Participation”:

Public comments help agencies develop regulations; we encourage comments from all viewpoints. Comments submitted to Regulations.gov should be the submitter’s own comments or be submitted with the commenter’s permission. The development of federal regulations is within the jurisdiction of the U.S. Government’s executive branch agencies. It is a violation of federal law to knowingly and willfully make a materially false, fictitious, or fraudulent statement or representation including false statements about your identity or your authority to submit a comment on someone else’s behalf, in relation to the development of such federal regulations, including through comments submitted on Regulations.gov.

Subject to 18 U.S.C. § 1028(c), it is also a violation of federal law to knowingly use, without lawful authority, a means of identification of another person in connection with the violation of any federal law or the commission of a felony under state or local law.

By clicking the submit button, you are verifying that you are not making any materially false, fictitious, or fraudulent statement or representation regarding your identity or your authority to submit on someone else’s behalf with regard to the comment you are submitting on Regulations.gov, and that you are not using, without lawful authority, a means of identification of another person, real or fictitious, in connection with any comment you are submitting on Regulations.gov.¹⁸⁶

“fraudulent comments” from the docket and notify “[a]ll proper authorities”); Bode, *supra* note 175 (complaining that “the agency told me there was nothing it could do after someone hijacked my identity to claim I falsely supported killing net neutrality protections”); Press Release, A.G. Schneiderman Releases New Details On Investigation Into Fake Net Neutrality Comments (Dec. 13, 2017), <https://ag.ny.gov/press-release/2017/ag-schneiderman-releases-new-details-investigation-fake-net-neutrality-comments> (quoting, among others, unidentified individual as saying “I’m sick to my stomach knowing that somebody stole my identity and used it to push a viewpoint that I do not hold”).

186. *User Notice*, REGULATIONS.GOV (emphases added) (citations omitted), <https://www.regulations.gov/user-notice> (last visited Feb. 19, 2022).

This notice implies that a malattributed comment could be a federal crime. This may be part of a deterrence strategy on the part of the government to discourage anyone from sending malattributed comments. Whether users are likely to see this, in a user notice that contains several other paragraphs of policies, is uncertain. Moreover, although it may discourage some individual submitters from using a false name, it is unlikely to have any impact on large-scale operations.

Agencies have to make decisions about how to treat malattributed comments, once suspected or discovered. Because of the novelty of this issue, many agencies do not have protocols for how to resolve whether a comment is malattributed and, if so, policies on how to handle that comment in the docket. Such policies would address whether an agency should strive to resolve a question about a comment's provenance, or merely flag the potential issue. Also, and in line with the user notice described above, to the extent that criminal action is under consideration for particular malattributed comments, agencies may need to make staff available to assist with any investigations or prosecutions.

C. Technological Responses to Malattributed Comments

Technology readily exists to authenticate users and is in widespread use in many contexts. Common techniques include: secure login; two-factor authentication; biometric authentication using facial recognition or fingerprint; answering security questions or verifying names against a database (as is the case in voter registration); and clicking an additional "I agree" button to acknowledge and agree to terms of service. However, agencies currently do not have the technology in place to authenticate those filing comments in the way a government department authenticates someone applying for a driver's license or a commercial website authenticates someone buying a product to prevent credit card fraud.

Although tools are not in place to authenticate someone's identity, agencies do use tools to ensure that a commenter is a human instead of a bot. These tools are primarily a response to computer-generated comments but, by imposing a "speed bump" on the commenting process, they may also help to reduce malattributed comments.

The addition of reCAPTCHA to Regulations.gov is intended to help to "improve[] the integrity of the commenting process."¹⁸⁷ CAPTCHA is an

187. Press Release, Gen. Servs. Admin., GSA Launches Updated Regulations.gov to Improve the Integrity (Feb. 17, 2021), <https://www.gsa.gov/about-us/newsroom/news-releases/gsa-launches-updated-regulationsgov-to-improve-the-integrity-of-public-commenting-02172021#:~:text=WASHINGTON%20%E2%80%94%20The%20U.S.%20General%20Services.gov%20launching%20February%2018%2C%202021.&text=%E2%80%9CThe%20new%20Regulations.gov%20re,and%20mobile%2Dfriendly%20interface.%E2%80%9D> [hereinafter GSA Press Release].

example of a “Turing Test”—a thought experiment developed by Alan Turing to evaluate artificial intelligence—and stands for “Completely Automated Public Turing Test to tell Computers and Humans Apart.”¹⁸⁸ With CAPTCHA, users are presented an image of a set of visually distorted letters and numbers and asked to enter the same characters into a textbox. The idea was that machines would not be able to complete this task since only humans would be able to interpret the distorted characters. With advances in computing power this is no longer true, and CAPTCHA has evolved. In 2018, Google announced “reCAPTCHA v.3” which eliminates the need for any human interaction with CAPTCHA at all.¹⁸⁹ By using risk analysis algorithms that assign a risk “score” to every person browsing a website using the tool, the software alerts administrators if fraudulent activity is detected.¹⁹⁰

Also, Regulations.gov now includes a comment application programming interface to allow authorized entities to post mass comment campaigns to Regulations.gov if they have been verified by GSA using a commercial identity validation service.¹⁹¹ In the press release announcing these changes, GSA indicated that this was “to assure such entities ‘are who they say they are.’”¹⁹² The service does not aim to verify the identities of individual commenters, however.

The public prominence of malattributed comments prompts a fresh look at whether agencies should verify commenter identity, either on the front-end or after either an internal or external review flags a comment as potentially malattributed. Although authentication is a common practice and technically straightforward in many circumstances, the practice would be in tension with agency policies to permit anonymous comments.

V. COMPUTER-GENERATED COMMENTS

A. *Legal Issues Raised by Computer-Generated Comments*

The APA requires agencies to provide an opportunity to comment to “interested persons.”¹⁹³ The term “interested” is undefined and is generally

188. *CAPTCHA*, COMPUTER HOPE (Oct. 11, 2021), <https://www.computerhope.com/jargon/c/captcha.htm>. The “imitation game” experiment proposed by Turing was invented as a way of approaching the hard question of “Can machines think?”. See A.M. Turing, *Computing Machinery and Intelligence*, 59 MIND 433, 433 (1950).

189. *Introducing reCAPTCHA v3: The New Way to Stop Bots*, GOOGLE SEARCH CENT. BLOG (Oct. 29, 2018), <https://developers.google.com/search/blog/2018/10/introducing-recaptcha-v3-new-way-to>.

190. *Id.*

191. *Regulations.gov API*, OPENGSA, <https://open.gsa.gov/api/regulationsgov/> (last visited Feb. 19, 2022).

192. See GSA Press Release, *supra* note 187.

193. 5 U.S.C. § 553(b).

understood not to limit the scope of potential commenters.¹⁹⁴ The term “persons” is defined as follows: “person includes an individual, partnership, corporation, association, or public or private organization other than an agency.”¹⁹⁵ When Congress passed the APA, it would not have contemplated that a computer might send a comment. But the definition is instructively broad; it is not limited to natural persons, and courts have read the word capaciously.¹⁹⁶ Moreover, because a person must set a computer-generated comment in motion, the § 551 definition is arguably met in any event.¹⁹⁷

As described above, agencies are required to respond to significant issues raised in comments.¹⁹⁸ As of this writing, no courts appear to have interpreted this requirement in light of computer-generated comments. During the interviews, agency staff expressed skepticism that a computer-generated comment would bring content or issues to the rulemaking docket that were not otherwise raised by other comments. But these staff also expressed their commitment to reviewing all comments, regardless of origin, to ensure compliance with their obligations to consider and respond to comments.

It is theoretically possible—if highly unlikely at this time—that a person would challenge an agency action because of its failure to adequately account for the substance of a computer-generated comment. Should such circumstances arise, courts may consider factors such as whether the petitioner can demonstrate the reliability or authenticity of the computer-generated comment, and whether the comment contains information that is relevant, unique, and not adequately addressed by the agency.¹⁹⁹

It is also possible that authentication technology might automatically exclude either computer-generated comments or ordinary comments that raise unique significant issues. If the agency’s obligation to consider and respond to significant comments does not change in such circumstances,

194. See Herz, *supra* note 44, at 357–58.

195. 5 U.S.C. § 551(2).

196. See, e.g., O’Rourke v. U.S. Dep’t of Just., 684 F. Supp. 716, 718 (D.D.C. 1988) (holding that “person” includes non-citizens and collecting cases); Neal-Cooper Grain Co. v. Kissinger, 385 F. Supp. 769, 776 (D.D.C. 1974) (holding that a foreign government or instrumentality thereof is “person”).

197. 5 U.S.C. § 551.

198. See *supra* notes 94–96 and accompanying text.

199. In the evidentiary context, courts have managed to assess the admissibility of electronically stored information (which may include computer-generated information) on the basis of the Federal Rules of Evidence; for example, proponents must demonstrate the information’s relevance, reliability, authenticity, and so on. See, e.g., Lorraine v. Markel Am. Ins. Co., 241 F.R.D. 534, 538 (D. Md. 2007). This is not to suggest that the Federal Rules apply to administrative records; rather, this example is offered to demonstrate that courts may find useful analogies that may be applied consistently with their equitable powers and authority under the APA.

technological means of identifying computer-generated comments would have to account for this overarching obligation.

B. Policy and Technical Issues Raised by Computer-Generated Comments

The policy issues raised by computer-generated comments overlap significantly with those already identified for mass and malattributed comments. For example, the presence of computer-generated comments may undermine public confidence in the rulemaking process or draw down agency resources. Many of the issues presented by computer-generated comments, however, are technical. First, one issue is the ability of agencies to identify computer-generated comments. In 2019, an experiment demonstrated the ease with which bots mimic human speech, therefore making it difficult to distinguish computer-generated comments from comments directly submitted by persons.²⁰⁰ The focus of this experiment was a comment period on a waiver from federal requirements requested by the Idaho Medicaid program.²⁰¹ A text generation model was utilized to submit 1,001 comments on the proposed waiver.²⁰² The inputs for this model were thousands of comments submitted in response to Medicaid waivers previously requested by a number of other states.²⁰³ These inputs were used to train the model to employ search-and-replace techniques as a means of generating comments, which were submitted automatically to the Centers for Medicare and Medicaid Services (CMS) at random intervals.²⁰⁴

Following the submission of the computer-generated comments, subjects were recruited to judge whether particular comments in the docket were submitted by a bot or human.²⁰⁵ On average, the respondents—all of whom had previously demonstrated competency in identifying conspicuous bot texts—correctly classified fewer than half of the comments.²⁰⁶ Performance was particularly poor in the context of computer-generated comments, in that less than one-third were correctly recognized.²⁰⁷ These results indicate that the computer-generated comments were as a general matter plausibly human, therefore making consistent sorting of such submissions a non-trivial exercise for the agency. At the conclusion of the experiment, the researcher

200. Max Weiss, *Deepfake Bot Submissions to Federal Public Comment Websites Cannot Be Distinguished from Human Submissions*, TECH. SCI. 2 (Dec. 17, 2019), <https://techscience.org/a/2019121801/>.

201. *See id.* at 12.

202. *Id.* at 2.

203. *Id.* at 12.

204. *Id.* at 2.

205. *Id.*

206. *Id.*

207. *Id.* at 23.

revealed the computer-generated comments and requested that CMS withdraw the bot submissions from consideration.²⁰⁸

These results are consistent with assessments of computer-generated comments that have occurred outside of the context of experimentation. A variety of analyses have emphasized that search-and-replace algorithms, and the resulting comment-to-comment variation in content, enhance the difficulty of identifying computer-generated comments. As a result, “analysts have struggled to pinpoint” the precise frequency with which computer-generated comments occur.²⁰⁹

Are there approaches for identifying computer-generated comments in a systematic manner? The FCC’s net neutrality policy is a good place to turn in this regard, as researchers have expended considerable energy identifying computer-generated comments that were submitted in this particular rulemaking. Note that these approaches entail identifying computer-generated comments in hindsight, as opposed to screening for such comments during the intake process.

One analysis focused on the text of net neutrality comments, searching for expressions regularly contained in submissions.²¹⁰ The analysis discovered combinations of phrases consistent with the automated deployment of search-and-replace algorithms.²¹¹ Take, for example, the following comment excerpt: “Americans, as opposed to Washington bureaucrats, deserve to enjoy the services they desire.”²¹² This sentence repeatedly appeared in comments in numerous other permutations, with “Americans” replaced by terms such as “people like me” and “individual citizens.”²¹³ Similarly, “the FCC,” “so-called experts,” and other analogous phrases substituted for “Washington bureaucrats.”²¹⁴ One result of this automation was the submission of large numbers of comments that, while not identical, conveyed essentially equivalent sentiments.²¹⁵ Another characteristic of this process was the brevity of the resulting computer-generated comments.²¹⁶ Increases in comment length multiply opportunities “for the appearance of ‘tells’ (e.g. repeated words, incorrect grammar, nonsensical sentiment) that the comment was not created by a human.”²¹⁷

208. *Id.* at 26.

209. Krems, *supra* note 171, at 71.

210. Jeff Kao, *More Than a Million Pro-Repeal Net Neutrality Comments Were Likely Faked*, HACKERNOON (Nov. 22, 2017), <https://hackernoon.com/more-than-a-million-pro-repeal-net-neutrality-comments-were-likely-faked-e9f0e3ed36a6>.

211. *Id.*

212. *Id.*

213. *Id.*

214. *Id.*

215. *See id.*

216. *See* Krems, *supra* note 171, at 75.

217. Weiss, *supra* note 200, at 12.

Other analyses have examined over-time patterns of the submission of net neutrality comments with identical and near-duplicate content, an approach that is useful for identifying mass comment campaigns (regardless of human or computer submission). One such pattern is the receipt of large numbers of comments at precisely the same moment.²¹⁸ Researchers discovered, for example, that on “nine different occasions, more than 75,000 comments were submitted at the very same second—often including identical or highly similar comments.”²¹⁹ Another pattern is embodied by the submission of the following comment excerpt: “The unprecedented regulatory power the Obama Administration imposed on the Internet is smothering innovation, damaging the American economy and obstructing job creation.”²²⁰ This text occurred in approximately a half-million comments.²²¹ These comments were submitted at near-constant rates for given periods, which were punctuated by interludes during which no such comments were received.²²² This cycle suggests that bots were turning on and off at specified intervals.²²³

Another indication of the submission of computer-generated comments was repetition in email addresses, in particular domains and locations exhibiting behavior inconsistent with human messaging activity. One firm determined that millions of comments were the product of websites that produce one-off emails and are unable to receive messages.²²⁴ The FCC also discovered that hundreds of thousands of emails originated “from the same address in Russia.”²²⁵

The regular submission of computer-generated comments was also suggested by the nature of the information submitted along with the comments themselves. When humans fill out information, the resulting inputs are typically inconsistent. For example, name, address, and email fields are often left blank, and individuals utilize varying formats. In the

218. DAVID FREEMAN ENGSTROM, DANIEL E. HO, CATHERINE M. SHARKEY & MARIANO-FLORENTINO CUÉLLAR, *GOVERNMENT BY ALGORITHM: ARTIFICIAL INTELLIGENCE IN FEDERAL ADMINISTRATIVE AGENCIES* 60 (2020), <https://www-cdn.law.stanford.edu/wp-content/uploads/2020/02/ACUS-AI-Report.pdf>.

219. Hitlin, Olmstead & Toor, *supra* note 4, at 3.

220. *Id.* at 7.

221. See Chris Sinchok, *An Analysis of the Anti-Title II Bots*, MEDIUM (May 14, 2017), <https://medium.com/@csinchok/an-analysis-of-the-anti-title-ii-bots-463f184829bc>.

222. *See id.*

223. *Id.*

224. Grimaldi & Overberg, *supra* note 7 (“A review of the FCC comments by data-analytics firm Emprata determined that 36% of the docket, 7.75 million comments, were attributable to FakeMailGenerator.com, a site that generates one-time e-mails and can’t receive e-mails. The analysis was commissioned by a group of telecommunications firms that support the Trump-administration proposal.”).

225. *Id.*

context of the “unprecedented regulatory power” comments referenced earlier, however, fewer than ten submissions failed to contain complete information.²²⁶ Furthermore, these names, addresses, and emails exhibited unusual similarity in presentation.²²⁷ Finally, exceedingly few comments requested that the FCC provide email confirmation of receipt.²²⁸ These attributes suggest that algorithms, rather than humans, were the immediate sources of the submitted information.²²⁹

1. *Current Agency Practices*

In the interviews, agency staff expressed their awareness of computer-generated comments having been submitted in a few rulemaking proceedings. Despite this awareness, the staff we interviewed did not report systematic approaches to identify computer-generated comments. One agency discovered computer-generated comments through a *Wall Street Journal* report on the rulemaking, as well as the rulemaking team’s identification of a number of unusual comments.²³⁰ These comments consisted of strings of nonsensical words, which made the agency suspicious that the submissions were not generated by humans.

Despite the availability of tools discussed earlier under mass and malattributed comments, implementing approaches to systematically identify computer-generated comments was not a high priority for the agencies we interviewed. Agency staff characterized the discovery of computer-generated comments as requiring substantial effort, a resource-intensive undertaking that is not worth the dedication of agency bandwidth. In general, the interviews revealed that agencies are not focused on the issue of computer-generated submissions in and of themselves. Rather, they indicated greater concern about mass and malattributed comments whose detrimental attributes may be deepened by computer generation. Despite this concern, the agency staff we interviewed reported as their primary concern the need to identify and respond to significant issues that comments raise, regardless of a given comment’s source.

One reason for the lack of attention to computer-generated comments may be that agencies are already using de-duplication tools to address mass comments. Computer-generated comments, in other words, are not seen as creating problems in rulemaking proceedings other than increasing the volume of comments received by agencies—thereby turning the matter into

226. Hitlin, Olmstead & Toor, *supra* note 4, at 7; see Sinchok, *supra* note 221.

227. See Sinchok, *supra* note 221.

228. *Id.*

229. See *id.*

230. See Grimaldi & Overberg, *supra* note 7.

one of mass comment management. As an agency official put it during an interview, computer-generated comments essentially present agencies with a de-duplication task. With the utilization of de-duplication software, the unique content in computer-generated comments can be readily identified.

As this perception indicates, agency staff generally expressed that the generation of comments by computers is not, in and of itself, an important attribute of submissions. The point was repeatedly made during the interviews that it is the substance of comments that matters, as opposed to the identity of submitters or the volume of comments. Agencies were not overly concerned that computer-generated comments convey insights that have not separately been communicated through human comments. That said, agencies emphasized that they would not exclude a computer-generated comment based on the source of the submission but would consider whether it raised significant issues requiring agency consideration.

2. *Threat Versus Practice*

In sum, there is currently a disjuncture between conceptions of computer-generated comments from the vantage points of technologists and the agency staff we interviewed. Technologists we interviewed warned of a present—and especially future—in which computer-generated comments effectively mimic human content, thereby making prevention and detection an impossibility. The agency staff we interviewed, by contrast, were not overly concerned with such scenarios at this time. They saw de-duplication tools as being adequate for the task and did not seem anxious to experiment with additional technologies to streamline the comment review process. Notwithstanding current perceptions, in the years ahead, it will be important to monitor whether the technologies that enable mass, malattributed, and computer-generated comments threaten to undermine the perceived legitimacy of the notice-and-comment process and the ability of agency officials to make sense of and consider comments thoughtfully.

VI. INNOVATIONS TO ENHANCE PARTICIPATION AND COMMENTING

The foregoing discussion has identified some of the risks associated with mass, malattributed, and computer-generated comments. These risks are real, and agencies must undertake appropriate measures to ensure that they protect the integrity and value of the notice-and-comment process. But technology can present opportunities as well as challenges. As we have already seen, agencies extensively use de-duplication software to help them process mass comment campaigns.²³¹ And this is only a preview of what

231. *See supra* Section III.C.

agencies can accomplish with newly emerging technologies. This section analyzes how agencies can use technology to respond to comments generally, especially mass comments submitted by either humans or computers. It also considers how agencies might use technology in the future to enhance and supplement the notice-and-comment process, separate from what they might do with respect to mass comments.²³²

A. *Summarization Technologies and Enhancing the Value of Public Commenting*

Although our focus has been on mass, malattributed, and computer-generated comments, an additional salient and urgent opportunity for regulators is using new technologies to enhance the process of reviewing public comments.²³³

While our interviews found that agencies are not currently using such tools, affordable technology is on the horizon to help agencies more easily make sense of public comments. This technology will not only save agencies' time, but also assist them to better analyze, spot patterns in, and understand public comments.

NLP techniques can help comment reviewers both summarize and sort comments, helping them to extract the most important substantive information from the comments.²³⁴ For example, agencies can use these techniques to identify those parts of comments that bear on questions that are of particular interest to rule-writers, or that contain relevant legal, technical, or operational information.²³⁵

232. See generally Beth Simone Noveck, *The Innovative State*, 150 DAEDALUS, no. 3, 2021, at 121 (exploring how the federal government can use data-processing tools to facilitate diverse citizen engagement while helping agencies interpret collected data).

233. See *Fake It Till They Make It*, *supra* note 3 (testimony of Beth Simone Noveck, Professor and Director, The Governance Lab, New York University).

234. See Livermore, Eidelman & Grom, *supra* note 18, at 980 (discussing “needle-in-the-haystack” and “forest-for-the-trees” challenges of mass rulemakings).

235. The field of Natural Language Processing (NLP) encompasses a wide range of technologies that use computational tools to convert natural language artifacts into a format that can be processed and analyzed using computational and statistical tools. NLP techniques include de-duping software as well as:

- **Flesch-Kincaid Readability:** a measure of the difficulty or clarity of written English. The readability score of a text is based on the average number of words per sentence and the average number of syllables per word. Other readability metrics include the Gunning Fog Index and the Spache Index. Jens Frankenreiter & Michael A. Livermore, *Computational Methods in Legal Analysis*, 16 ANN. REV. L. & SOC. SCI. 39, 43 (2020).
- **Linguistic Inquiry and Word Count (LIWC):** a software application that counts “words in psychology-relevant categories,” such as whether words are associated with honesty or deception or track individual thinking styles. Yla R. Tausczik & James W. Pennebaker, *The Psychological Meaning of Words: LIWC and Computerized Text*

While still a challenging task, researchers and entrepreneurs have developed tools for summarization, including shortening and extracting the most relevant portions of documents. One technique agencies can use to sort information is topic modeling. In brief, a topic model is a computational text analysis technique that extracts patterns in the semantic content in a corpus of documents, generating a list of topics (which are distributions over the vocabulary in a corpus) and characterizing every document as a distribution over those topics.²³⁶ Topic modeling makes it possible to sort textual information automatically and quickly into semantic categories.

Both Google and Microsoft announced in 2019 that they had built systems capable of summarizing an enormous range of texts, including news, fictional stories, instructions, emails, patents, and legislative bills.²³⁷ The MIT Center for

Analysis Methods, 29 J. LANGUAGE & SOC. PSYCH. 24, 27 (2010).

- Plagiarism Detection: a technique for detecting similarity in written texts, with the goals of identifying plagiarism or copyright infringement. Frankenreiter & Livermore, *supra* at 44.
- Automated Document Summarization: an application that processes larger texts, or multiple texts, as inputs with the goal of generating summary texts that convey a condensed version of the original input texts. *Id.* at 42–43.
- Sentiment Analysis: a measure of words based on positive or negative valence, as a way to estimate the opinions or attitudes expressed in a written text. Frankenreiter & Livermore, *supra* at 43.
- Topic modeling: a family of computational tools used to discover the latent thematic structure within a collection of documents. *Id.* at 44.
- Word Embeddings: a technique for mapping words or phrases into a vector space that compactly represents semantic content. One technique for generating word embeddings involved “skip-gram” where a model is trained to use a word to predict surrounding words in a document. *Id.*

236. Several sources provide an interested reader with a background in NLP techniques. See, e.g., Peter Kincaid, Robert P. Fishburne Jr., Richard L. Rogers & Brad S. Chissom, *Derivation of New Readability Formulas (Automated Readability Index, Fog Count, and Flesch Reading Ease Formula) for Navy Enlisted Personnel*, Research Branch Report 8-75 (1975); Adam Feldman, *Opinion Clarity in State and Federal Trial Courts*, in LAW AS DATA: TEXT, COMPUTATION, AND THE FUTURE OF LEGAL ANALYSIS 407, 415–18 (Michael A. Livermore & Daniel N. Rockmore eds., 2019); Yla R. Tausczik & James W. Pennebaker, *The Psychological Meaning of Words: LIWC and Computerized Text Analysis Methods*, 29 J. LANGUAGE & SOC. PSYCH. 24 (2010); BING LIU, SENTIMENT ANALYSIS: MINING OPINIONS, SENTIMENTS, AND EMOTIONS (2015); David M. Blei, Andrew Y. Ng & Michael I. Jordan, LATENT DIRICHLET ALLOCATION, 3 J. MACH. LEARNING RES. 993 (2003); Tomas Mikolov, Ilya Sutskever, Kai Chen, Greg Corrado & Jeffrey Dean, *Distributed Representations of Words and Phrases and Their Compositionality*, in ADVANCES IN NEURAL INFORMATION PROCESSING SYSTEMS 26, 3136 (2013).

237. Patrick Fernandes, Miltiadis Allamanis & Marc Brockschmidt, *Structured Neural Summarization*, published at Int’l Conf. on Learning Representations (Feb. 2019), <https://arxiv.org/pdf/1811.01824.pdf>; see also Peter Liu & Xin Pan, *Text summarization with*

Constructive Communication conducted research on large-scale Twitter data sets.²³⁸ Its Electome project, for example, extracted semantic content from the entire corpus of Twitter data—billions of tweets—in order to summarize the core political messages of the day and help drive election coverage.²³⁹

Such summarization and sorting processes sometimes combine automation with human intelligence to make quick work of large data stores and overcome the biases that arise from using automation alone. Journalists took advantage of such tools, for example, when they needed to rapidly sift through the 13.4 million documents that comprised the so-called “Paradise Papers.”²⁴⁰ Public institutions have also used natural language data analytical techniques to make sense of social media data. To help the United Nations Children’s Fund and other actors craft more effective pro-immunization messaging programs, researchers set out to monitor social media networks, including blogging platforms, forums, Facebook, Twitter, Tumblr, and YouTube.²⁴¹ They sought to analyze prevalent conversation themes according to volume, types of engagement, and demographics; to identify influencers across languages and platforms; and to develop specific recommendations for improving messaging strategies across languages, platforms, and conversation themes.²⁴² The research methodology involved scraping text from conversations on social media platforms in different languages to summarize and analyze them.²⁴³

A State Department project from 2016 shows how agencies might make sense of rulemaking comments using a combination of artificial intelligence and human oversight. To improve its passport application and renewal process, the State Department ran “an online public engagement process to ask people what improvements they wanted,” receiving almost 1,000

TensorFlow, GOOGLE AI BLOG (Aug. 24, 2016), <https://ai.googleblog.com/2016/08/text-summarization-with-tensorflow.html>.

238. The Laboratory for Social Machines, which carried out some of this research, was incorporated into the MIT Center for Constructive Communication in 2021. See LABORATORY FOR SOCIAL MACHS., MIT MEDIA LAB, <https://www.media.mit.edu/groups/social-machines/overview/>.

239. See THE ELECTOME, <https://www.media.mit.edu/videos/sm-electome-2017-01-31/> (last visited Feb. 19, 2022).

240. See Fabiola Torres López, *How They Did It: Methods and Tools Used to Investigate the Paradise Papers*, GLOB. INVESTIGATIVE JOURNALISM NETWORK (Dec. 4, 2017), <https://gijn.org/2017/12/04/paradise-papers/> (describing how data were consolidated to facilitate the collaborative investigation into the papers).

241. STEFAAN G. VERHULST & ANDREW YOUNG, THE POTENTIAL OF SOCIAL MEDIA INTELLIGENCE TO IMPROVE PEOPLE’S LIVES 38, GOVLAB (Sept. 24, 2017), <https://datacollaboratives.org/static/files/social-media-data.pdf>.

242. See *id.*

243. *Id.* at 38–39.

suggestions.²⁴⁴ The Department used a third-party software company, which applied a text-mining algorithm to create summaries.²⁴⁵ Later, the Department gave the public an opportunity to review the summaries, “adding accountability but in a way that is efficient.”²⁴⁶ As one of us described before Congress, “[t]he combination of human and machine intelligence made it faster and easier to summarize content than using an algorithm alone.”²⁴⁷

To date, application of NLP to public comments in administrative rulemaking has been largely limited to de-duplication. While still under development, more advanced NLP techniques could eventually assist agency personnel in identifying relevant substantive content within comments and summarizing the information presented across a broad spectrum of comments. One of the challenges for deploying summarizing technology in the context of rulemaking is that there is often domain specific language that requires retraining the relevant models. However, for important rulemakings likely to receive a large number of comments, this investment may well be worth it. Furthermore, the addition of human oversight can provide a check on the performance of machine learning applications, making it possible to evaluate and confirm the reliability of new tools for summarization. While NLP tools can be used to augment, rather than replace, human review, the agency staff we interviewed expressed concerns related to how the use of new technologies might interact with their legal obligation to review and respond to comments. This legal uncertainty creates the risk that agencies may innovate slowly. Depending on their risk tolerance, it may prevent them from adopting these technologies at all.

B. Innovations in Equitable Participation

In addition to improving the commenting process ex-post using new technologies, agencies could also explore using complementary platforms and processes—ones already well-honed and tested by other governments—to create new opportunities for public engagement. These approaches could help solicit information and expertise from more diverse audiences to complement and supplement the notice-and-comment process. Building on ACUS’s earlier work, we conclude our discussion of public participation in rulemaking by looking at several contemporary examples of how governments are enhancing citizen participation using new technology.²⁴⁸

244. *Fake It Till They Make It*, *supra* note 3, at 152 (statement of Beth Simone Noveck, Professor and Director, The Governance Lab, New York University).

245. *Id.* at 152–53.

246. *Id.* at 153.

247. *Id.* at 153.

248. As Michael Herz wrote in a 2013 ACUS report:

Since 2011 with the reauthorization of the America COMPETES Act,²⁴⁹ a hundred federal agencies have run online challenges via Challenge.gov to tap the intelligence and expertise of the public.²⁵⁰ NASA has regularly used prize-backed challenges to spur crowdsourcing of innovative solutions from the public. The Asteroid Grand Challenge, for example, focused on finding all asteroid threats to human populations.²⁵¹ Prize-backed challenges require agencies to articulate and define exactly what information they need from the public and provide very transparent and specific criteria for evaluating public submissions. With ten years of experience administering prize-backed challenges, there may be useful insights for federal agencies to draw upon to improve public participation in agency decisionmaking.²⁵² For example, to the extent that addressing a particular regulatory problem hinges on the development of an innovative new method or technology, perhaps prizes could help increase the amount of private-sector development work aimed at those solutions.

[T]he online world in general has come to be increasingly characterized by participatory and dialogic activities, with a move from static, text-based websites to dynamic, multi-media platforms with large amounts of user-generated content. At the heart of this move to “Web 2.0” have been social media, blogs, Twitter, Facebook, YouTube, IdeaScale, wikis, Flickr, Tumblr, and the like. *Outside* the rulemaking setting, federal, state, and local governments have enthusiastically jumped on the social media bandwagon.

MICHAEL HERZ, USING SOCIAL MEDIA IN RULEMAKING: POSSIBILITIES AND BARRIERS 2 (Nov. 21, 2013) (report to Admin. Conf. of the U.S.), <https://www.acus.gov/sites/default/files/documents/Herz%20Social%20Media%20Final%20Report.pdf>.

249. See America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Reauthorization Act of 2010, Pub. L. No. 111-358, 124 Stat. 3982 (Jan. 4, 2011) (reauthorizing an Act to encourage innovation and research across the United States).

250. See *About Challenge.gov*, CHALLENGE.GOV, <https://www.challenge.gov/about> (last visited Feb. 19, 2022) (“Challenge.gov . . . is a leading program that supports federal agencies to mature and scale the use of prize competitions in order to advance their missions.”).

251. See *Asteroid Grand Challenge*, NASA, <https://www.nasa.gov/content/asteroid-grand-challenge> (last visited Feb. 19, 2022) (encouraging public engagement in NASA’s defense activities).

252. Challenge.gov is one example of institutionalized public engagement or what is sometimes referred to as “CrowdLaw,” namely the use of technology to engage the public in law, rule, or policymaking. It is the idea that public institutions work better when they increase citizen engagement by using new technologies to obtain diverse sources of information, insight and expertise at each stage of the law and policymaking cycle to improve the quality as well as the legitimacy of the resulting laws, regulations, and policies, especially by engaging with underrepresented communities. See Victòria Alsina & José Luis Martí, *The Birth of the CrowdLaw Movement: Tech-Based Citizen Participation, Legitimacy and the Quality of Lawmaking*, 40 ANALYSE & KRITIK 337, 337–38 (2018) (introducing the concept of CrowdLaw). CrowdLaw does not describe one form of participation. Rather, it describes a variety of different methods, tools and platforms that institutions use.

Expert sourcing, where officials crowdsource expert advice, is one example of how government bodies are implementing more citizen engagement. The Federation of American Scientists' Congressional Science Policy Initiative invites hundreds of scientists to help draft questions for Members of Congress to ask of committee witnesses.²⁵³ Such crowdsourcing, facilitated by new technology, helps beleaguered staffers write more informed questions. The Governance Lab at New York University uses videoconferencing to help coordinate online dialogues among experts to advise government officials on a variety of topics.²⁵⁴ In Fall 2020, for example, the Governance Lab ran six deliberative sessions at the behest of seven governments in Latin America to help them develop implementable strategies for responding to specific public health challenges.²⁵⁵

Relatedly, some jurisdictions have used online collaborative drafting processes and platforms to write policies and rules *with* the public, especially with expert members of the public. Instead of an advisory committee or hearing with a handful of experts or writing rules entirely behind closed doors, online collaborative annotation makes it possible to hear from a broader and deeper range of experts and to focus their participation on specific comments on a document. In 2018, the German government used an annotation platform to “expert source” feedback on its draft artificial intelligence policy. By putting the draft on Hypothes.is, a free and open-source annotation tool, the German Chancellor's Office, working in collaboration with Harvard University's Berkman Center for Internet and Society, was able to solicit the input of global legal, technology, and policy experts. Using an annotation platform also made it possible for people to see one another's feedback, instead of a series of disconnected comments. One could envision an agency using collaborative annotation to invite experts to annotate and comment on the text of a draft rule.

253. CONGRESSIONAL SCIENCE POLICY INITIATIVE, <https://fas.org/congressional-science-policy-initiative/> (last visited Feb. 19, 2022).

254. See, e.g., *NYU Tandon's Governance Lab Joins Virtual Discussion with Congressional Subcommittee on Modernizing Congress*, N.Y.U. TANDON SCH. OF ENG'G (May 11, 2020), <https://engineering.nyu.edu/news/nyu-tandons-governance-lab-joins-virtual-discussion-congressional-subcommittee-modernizing> (explaining how different governments adapted to virtual videoconferencing forums like Microsoft Teams and Cisco WebEx to communicate and strategize on effective policies and regulations in the early stages of the COVID-19 pandemic).

255. See *Smarter Crowdsourcing: Coronavirus*, SMARTER CROWDSOURCING, <https://coronavirus.smartercrowdsourcing.org> (last visited Feb. 19, 2022); see also *The GovLab and the IDB Bring Innovative Ideas to Latin American Government Officials*, IDB NEWS (Sept. 30, 2020), <https://www.iadb.org/en/news/govlab-and-idb-bring-innovative-ideas-latin-american-government-officials>.

Governments are experimenting with the use of random samples of members of the public as a mechanism to obtain more legitimate forms of participation. New technology is making it easier to assemble these representative samples of citizens, known as mini-publics,²⁵⁶ to weigh in on a governing process. Small groups are known as citizen juries while larger random samples are called citizen assemblies. For example, in the Brussels-Capitol region, a random sample of citizen representatives serves on each parliamentary committee.²⁵⁷ Citizens ask questions and provide advice.²⁵⁸ These processes could also be designed to elicit expertise and know-how relevant to agency decisionmakers.

Similarly, some have suggested ideas such as administrative agencies empanelling a thousand randomly selected citizens to provide oversight over agency decisionmaking.²⁵⁹ A variation on this idea would use citizen juries to solicit information on agency agenda-setting and priorities,²⁶⁰ providing the citizen jurors with background materials generated by deliberative polling before their discussions.²⁶¹ Alternatively, the agency could convene a demographically representative group of citizens to consider a particular issue, and it would then carefully consider their preferred approach.

Finally, instead of selecting a random sample, other institutions have relied on self-selected participation using a variety of tools. In month-long online exercises known as “Evidence Checks,” UK parliamentary committees invite experts, stakeholders, and members of the public to comment on the validity of evidence on which a policy is based.²⁶² The process begins when

256. Claudia Chwalisz, *A New Wave of Deliberative Democracy*, CARNEGIE EUR. (Nov. 26, 2019), <https://carnegieeurope.eu/2019/11/26/new-wave-of-deliberative-democracy-pub-80422>.

257. *Belgian Sortition Models: Institutionalizing Deliberative Democracy*, CROWDLAW FOR CONGRESS, <https://congress.crowd.law/case-belgian-sortition-models.html> (last visited Feb. 19, 2022).

258. *Id.*

259. See David R. Arkush, *Direct Republicanism in the Administrative Process*, 81 GEO. WASH. L. REV. 1458, 1462–63, 1494 (2013) (outlining a “practicable” model of direct republicanism in the administrative process which imagines a system of “direct” citizen engagement in decisionmaking, beyond simply creating a space for citizens to express their views).

260. BETH SIMONE NOVECK, SMART CITIZENS, SMARTER STATE: THE TECHNOLOGIES OF EXPERTISE AND THE FUTURE OF GOVERNING 220–21 (2015).

261. See Reeve T. Bull, *Making the Administrative State “Safe for Democracy”*: A Theoretical and Practical Analysis of Citizen Participation in Agency Decisionmaking, 65 ADMIN. L. REV. 611, 640, 644 (2013) (describing the process by which the group would arrive at a recommendation: they would receive materials in advance, review the materials prior to a formal meeting, debate the issues over a period of several weeks or months, and reach a consensus or otherwise vote upon a recommendation).

262. See *UK Parliament Evidence Checks*, NESTA, <https://www.nesta.org.uk/feature/six-pioneers-digital-democracy/uk-parliament-evidence-checks> (last visited Feb. 19, 2022).

government departments supply information to their respective committees about an issue. Each committee publishes the information on a parliament.uk web page, and it is scrutinized by a wider pool of invitees. The committee also presents specific questions and problems that it would like participants to address. In contrast to a representative sample, this process allows a group of people with relevant experience and expertise to identify gaps in research that require further review.²⁶³

Another example of self-selected participation was initiated by the New Jersey Department of Education in March 2021 when that agency invited students, parents, and educators across the state to help inform the Department’s policymaking by responding to questions via All Our Ideas, a free platform developed at Princeton University.²⁶⁴ All Our Ideas has hosted over 10,000 wiki surveys.²⁶⁵ The owner of the consultation uses the platform to write a series of statements that are then randomly presented to the participant. People select the response they prefer (or “I can’t decide” as a third answer) or they may submit their own response. As people are repeatedly selecting between two randomly generated options, it is a faster and easier mechanism for responding to a series of questions. This so-called “wiki survey” method of showing people two pieces of information and having them choose between them and/or submit a new item offers efficiency benefits over open-ended commenting and can be designed to draw on participant expertise.²⁶⁶

CONCLUSION

Exactly half a century ago, ACUS adopted a recommendation entitled *Public Participation in Administrative Hearings*.²⁶⁷ The project report underlying

263. *See id.*

264. *See Fake It Till They Make It*, *supra* note 3, at 26–29 (testimony of Beth Simone Noveck, Professor and Director, The Governance Lab, New York University).

265. MATTHEW SALGANIK, *BIT BY BIT: SOCIAL RESEARCH IN THE DIGITAL AGE* 113–14 (Princeton Univ. Press, 2017).

266. *Id.*

267. ADMIN. CONF. OF THE U.S., RECOMMENDATION 71-6, PUBLIC PARTICIPATION IN ADMINISTRATIVE HEARINGS (1971), <https://www.acus.gov/recommendation/public-participation-administrative-hearings> [hereinafter ACUS Recommendation 71-6]. Three years before, ACUS had recommended federal funding of a “People’s Counsel” that would “represent the interests of the poor in all Federal administrative rulemaking substantially affecting the poor.” ADMIN. CONF. OF THE U.S., RECOMMENDATION 68-5, REPRESENTATION OF THE POOR IN AGENCY RULEMAKING OF DIRECT CONSEQUENCE TO THEM ¶ B.4 (1968), <https://www.acus.gov/recommendation/representation-poor-agency-rulemaking-direct-consequence-them>. *See generally* Arthur Bonfield, *Representation of the Poor in Federal Rulemaking*, 67 MICH. L. REV. 511, 530–45 (1969) (arguing for such a “Poor People’s

the recommendation was written by the then-chair of ACUS, Professor Roger Cramton. Cramton's report, later published in the *Georgetown Law Journal*, broadly endorsed increased public participation in the administrative process generally, and rulemaking in particular.²⁶⁸ Reflecting the times, the report and the recommendation gave more attention to formal proceedings than to notice-and-comment rulemaking. Nonetheless, the recommendation that agencies make affirmative efforts to increase "meaningful and effective" public participation specifically included informal rulemaking.²⁶⁹ While emphasizing the need for broader participation, the recommendation also expressed concern that "public participation in agency proceedings should neither frustrate an agency's control of the allocation of its resources nor unduly complicate and delay its proceedings."²⁷⁰

Because of technological developments that no one foresaw decades ago, opportunities for participation have vastly increased. As in so many settings, however, these technological gains have not been an unmitigated good. Throughout the cybersphere, the stunning increases in the availability of information, the rapidity and ease of communication, and the transparency of more and more aspects of everyday activity have also created new vulnerabilities. Notice-and-comment rulemaking is no exception.

This Article has examined three phenomena of contemporary rulemaking that are examples of how the online process has facilitated forms of commenting that can clog or perhaps undermine the rulemaking process. When the three are combined—when an agency receives millions of similar comments written and submitted by bots that purport to come from individuals

Counsel" and other efforts to ensure that poor people's interests are heard in rulemakings, though not through direct participation by the affected persons themselves).

268. Roger C. Cramton, *The Why, Where and How of Broadened Public Participation in the Administrative Process*, 60 GEO. L.J. 525, 526–27 (1972). As Cramton saw it, agency policies generally failed adequately to consider public needs and the public interest. *See id.* at 525. The problem was not that agencies were unresponsive; rather, it was that they were responsive only to the inputs they received, which were narrow. *See id.* at 525, 528–30. The solution, therefore, was to expose agencies to a broader range of inputs, interests, and information. *See id.* at 528–31.

269. ACUS Recommendation 71-6, *supra* note 267, at Recommendation A.1. The key provision reads:

Agencies engaging in notice-and-comment rulemaking should, to the extent feasible: (a) make available documents, materials and public submissions upon which the proposed rule is based; (b) invite the presentation of all views so that the agency may be apprised of any relevant consideration before formulating policy; (c) develop effective means of providing notice to the affected public and to groups likely to possess useful information; and (d) if there is a hearing, allocate time fairly among all participants.

Id. ¶A.1.

270. *Id.* at preamble.

who had nothing to do with them—something is clearly amiss. Such an avalanche of problematic submissions may mislead, distract, or overwhelm the agency, which in turn raises serious concerns about the real and perceived legitimacy of the outcome of the rulemaking. The FCC’s 2017 net neutrality rulemaking, which received widespread media attention, stands as the most prominent example of a rulemaking that struggled with this issue.²⁷¹

But that particular rulemaking is so well-known because it was unique; it was an unmatched perfect storm of mass, computer-generated, and malattributed comments. And even in that case, it does not appear that the agency was misled or reached a different conclusion than it would have had the notice-and-comment process not been so anarchic. Furthermore, focusing on the net neutrality rulemaking and thus lumping these three types of comments together ignores the distinct characteristics of each. For example, mass comments pose management challenges but do not threaten the legitimacy of the process; malattributed comments pose a threat (albeit a small one) of harm not to the rulemaking process but to third parties; computer-generated comments are not problematic per se but may pose issues if they are misleading; and so on.

There is no legal objection to the public’s ability to submit mass comments to agencies, and even malattributed and computer-generated comments do not violate the law except in extreme circumstances. The solution here is likely not criminal prosecution, setting aside any rule that emerges from a docket that contains these comments, or broad prohibitions on forms of participation. Agencies should respond to mass, malattributed, and computer-generated comments not with referrals to the Department of Justice but in two more modest ways. First, they should develop and publicize policies that will encourage helpful comments and discourage or prohibit misleading ones. Second, just as the response to problematic speech is more speech,²⁷² the response to abuses of new technologies rests on more technology. Agencies should take advantage of the many software tools that are increasingly available to screen, sort, de-duplicate, summarize, and digest submissions. Finally, it is likely that the particular pathologies of the moment on which this Article focuses will fade as agencies learn to gather public input through mechanisms using methods in addition to the submission of

271. See Brian Fung, *FCC Net Neutrality Process ‘Corrupted’ by Fake Comments and Vanishing Consumer Complaints, Officials Say*, WASH. POST (Nov. 24, 2017), <https://www.washingtonpost.com/news/the-switch/wp/2017/11/24/fcc-net-neutrality-process-corrupted-by-fake-comments-and-vanishing-consumer-complaints-officials-say/>.

272. See *Whitney v. California*, 274 U.S. 357, 377 (1927) (Brandeis, J., concurring) (“If there be time to expose through discussion the falsehoods and fallacies, to avert the evil by the processes of education, the remedy to be applied is more speech, not enforced silence.”).

comments on proposed rules.

In the five decades since ACUS first endorsed broader public participation, notice-and-comment rulemaking has become the central mechanism for agency policymaking, and its particulars have been transformed through judicial elaboration, legislation, and technological developments. Yet the basic concerns have remained unchanged: how to ensure that the agency is fully informed and that all “interested persons” are able to participate but that the process remains manageable. Mass, malattributed, and computer-generated comments should be dealt with in light of those basic principles. To this end, ACUS adopted recommendation 2021-1, which focuses on agency management of these at once timeless and emerging considerations.²⁷³ Based on our research, we believe that mass, malattributed, and computer-generated comments do not, at least currently, fundamentally undermine the notice-and-comment process. However, such comments raise issues of sufficient significance that ongoing attention is warranted, both to mitigate the difficulties emanating from them, and to consider ways in which technology presents opportunities to enhance public engagement in rulemaking.

273. Adoption of Recommendations, 86 Fed. Reg. 36,075 (proposed July 8, 2021). Our recommendations, which we prepared to assist the relevant ACUS committee formulate its views, are available in our report available at <https://www.acus.gov/report/final-report-mass-computer-generated-and-fraudulent-comments>.