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Stakeholder Participation and Regulatory Policymaking in the United States

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Regulation is one of the most common and important ways in which public policy is made and implemented in the United States.[2] Agencies of the federal government issue thousands of regulations on an annual basis.[3] Although many of these actions deal with routine matters, impose minimal burdens, and in some instances reduce or eliminate existing regulatory requirements, agencies annually promulgate hundreds of new regulations with significant effects on the economy and political system.[4]

Given the importance of regulation, an underlying concern regards the nature of stakeholder participation in the regulatory process. In one respect, stakeholder participation is salient as a means through which information about the economic and political ramifications of regulations is generated.[5] In another respect, stakeholder participation serves as a vehicle through which stakeholders become deeply involved in regulatory policymaking, by, for example, engaging in a "deliberative process that aims toward the achievement of a rational consensus over the regulatory decision."[6] With this range of possibilities in mind, to what extent does stakeholder participation in practice bring principles of information provision and deliberative engagement to bear in the regulatory process?

Two central questions are salient when evaluating stakeholder participation in the regulatory process.[7] First, who participates through various instruments of stakeholder involvement? Second, does stakeholder participation affect regulatory decision making? On both dimensions, it is difficult, if not impossible, to utilize a single standard of evaluation, and therefore to construct an overarching, uncontested assessment of stakeholder participation.

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[2] A regulation is the "whole or a part of an agency statement of general or particular applicability and future effect designed to implement, interpret, or prescribe law or policy or describing the organization, procedure, or practice requirements of an agency and includes the approval or prescription for the future of rates, wages, corporate or financial structures or reorganizations thereof, prices, facilities, appliances, services or allowances therefor or of valuations, costs, or accounting, or practices bearing on any of the foregoing." http://www.archives.gov/federal-register/laws/administrative-procedure/551.html.

[3] Maeve P Carey, "Counting Regulations: An Overview of Rulemaking, Types of Federal Regulations, and Pages in the Federal Register," Congressional Research Service, May 1, 2013, p. 5. http://fas.org/sgp/crs/misc/R43056.pdf.

[4] Carey, "Counting Regulations," p. 11. As defined in Executive Order 12866 (http://www.archives.gov/federal-register/executive-orders/pdf/12866.pdf), issued by President Clinton on September 30, 1993, "significant" rules include actions that "may have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive order." The George Washington University Regulatory Studies Center tracks significant, economically significant, and major regulations issued on an annual basis. http://regulatorystudies.columbian.gwu.edu/reg-stats.

[5] Cary Coglianese, "The Internet and Citizen Participation in Rulemaking," *I/S: A Journal of Law and Policy for the Information Society*, Vol. 1, No. 1 (Winter 2004/2005), p. 40.

[6] Coglianese, "The Internet and Citizen Participation in Rulemaking," p. 39.

[7] William T. Gormley, Jr. and Steven J. Balla, *Bureaucracy and Democracy: Accountability and Performance*, 3d ed. (Washington, DC: CQ Press, 2012).

In considering the nature of stakeholder participation itself, two standards of evaluation are immediately relevant. One standard is the quantity of stakeholder participation. To what extent do stakeholders take advantage of opportunities to participate in regulatory processes? A second standard is the composition of participating stakeholders. For example, do representatives of business firms and industry associations participate more frequently than consumers, environmentalists, and nongovernmental organizations (NGOs)? To what extent do individual stakeholders, as opposed to organizational representatives, participate in regulatory processes?

In one respect, value can be attached to high levels of stakeholder participation in democratic policymaking.[8] Similarly, participation by diverse arrays of stakeholders can be seen as superior to involvement on the part of narrow sets of interests. Such assessments, however, are far from certain and universal across standards of evaluation. Additional increments of stakeholder participation and diversity might, for a variety of reasons, add little to nothing to regulatory processes in terms of information provision and deliberative engagement.

Evaluating the impact of stakeholder participation on regulatory decision making is fraught with even greater uncertainty. Instruments of stakeholder participation occur within regulatory processes that are procedurally multi-faceted, making it difficult to connect specific agency decisions with particular manifestations of participation. Even if and when linkages can be made between stakeholder participation and regulatory outcomes, larger normative questions regarding the efficacy of stakeholder participation are naturally raised. For example, if regulation is not a plebiscitary process, then what should be the role, if any, of the respective quantity of participation by stakeholders representing divergent viewpoints in informing agency decisions?

In this report, we lay out the processes through which U.S. regulations are made, implemented, and evaluated, highlighting the instruments through which stakeholders participate in these processes. Our review demonstrates that there are extensive opportunities for stakeholder participation at all stages of the regulatory process. These opportunities, however, are typically oriented toward facilitating the provision of information on the part of stakeholders. Instruments of participation, in other words, do not generally advance stakeholder engagement in deliberative decision making, where deliberation is characterized by reflection on positions held by others and the possibility of changes in one's own preferences as a result of such reflection.[9]

Origins of Regulatory Authority

Under the U.S. Constitution, regulatory authority is divided among three branches of government. The legislative branch is granted the power to enact laws, the executive branch is

[8] Coglianese, "The Internet and Citizen Participation in Rulemaking," p. 40.

[9] James Bohman, *Public Deliberation: Pluralism, Complexity, and Democracy* (Cambridge, MA: The MIT Press, 2000). John S. Dryzek, *Deliberative Democracy and Beyond: Liberals, Critics, Contestations* (Oxford: Oxford University Press, 2002).

charged with administering and enforcing these laws, and the judicial branch is responsible for settling conflicts arising from laws and their enforcement. This separation of powers, and the corresponding checks and balances that the legislative, executive, and judicial branches impose on one another, is central in characterizing regulatory policymaking and stakeholder participation in regulatory processes.

Congress enacts legislative statutes by a majority vote of both the Senate and House of Representatives, followed by the signature of the president or a super-majoritarian override of a presidential veto.[10] Over the course of each two-year Congress, thousands of bills are introduced, but only a small fraction become law.[11] As of September 1, 2014, with approximately four months remaining in the 113th Congress, 6,244 bills had been introduced in the House, and 3,396 had been introduced in the Senate. A total of 146 of these bills have thus far been enacted into law.[12] Furthermore, only about ten percent of these enacted laws have regulatory consequences.[13]

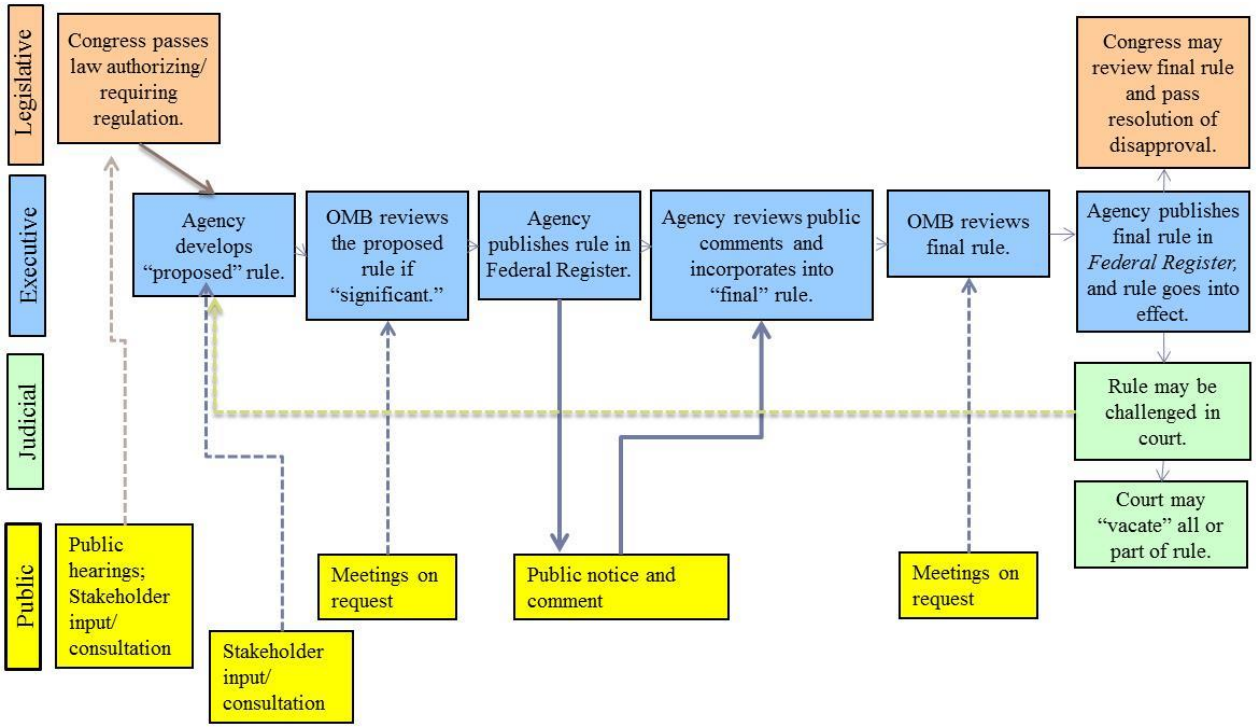
Legislative statutes with regulatory consequences confer authority upon executive branch agencies. Most of these organizations are cabinet departments, including the Department of Agriculture (USDA) and Department of Transportation (DOT), or executive branch agencies, such as the Environmental Protection Agency (EPA). Such agencies are subject to strong presidential oversight. Other agencies, such as the Securities and Exchange Commission, are more independent of the president, and are generally headed by bipartisan commissions of three to five members. All types of agencies, however, are closely monitored and often strongly influenced by legislators, judges, and stakeholders. Figure 1 illustrates the main steps in the development of regulations, from congressional passage of enabling legislation to implementation, and highlights the opportunities for stakeholder participation at each stage.

In the initial stage, Congress delegates legislative authority to agencies. The nature of this delegated authority varies substantially across statutes. Some statutes assign deadlines by which specific regulatory actions must be taken and specify the frequency with which existing regulations must be reconsidered. For example, under the Patient Protection and Affordable Care Act of 2010, agencies such as the Department of Labor (DOL) and Department of Health and Human Services were assigned deadlines by which dozens of regulations were to be promulgated.[14] By contrast, other statutes grant broad authority to agencies to take regulatory actions. The Clean Air Act of 1970 directed the EPA to establish national standards to "protect

[10] To override a presidential veto requires a two-thirds vote in each chamber.
[11] https://www.govtrack.us/congress/bills/statistics.
[12] Information on bills introduced and laws enacted is available at http://thomas.loc.gov/home/thomas.php.
[13] Susan Dudley and Kai Wegrich, "Regulatory Policy and Practice in the United States and European Union," The George Washington University Regulatory Studies Center Working Paper, forthcoming 2014. This count is based on a review of enacted laws. Laws without regulatory consequences deal with such matters as appropriations and the naming of bridges and post offices.
[14] Sam Batkins and Dan Goldbeck, "Analysis Finds Obamacare Already Missed Nearly Half of Its Regulatory Deadlines." http://americanactionforum.org/research/analysis-finds-obamacare-already-missed-nearly-half-of-its-regulatory-deadl.

public health" with an "adequate margin of safety," thus granting the agency not only wide latitude in setting standards but also ongoing responsibility for updating standards on a periodic basis.[15] In such instances, agencies have the authority to issue regulations in a manner consistent with broad statutory delegations.[16] Additionally, individuals and organizations from outside government have the authority to petition agencies to develop regulations consistent with existing legislative authority or to take legal action against agencies for failing to regulate pursuant to statutory delegations.[17]

Figure 1: Stakeholder Participation and the Regulatory Process



Source: Susan E. Dudley, "Opportunities for Stakeholder Participation in U.S. Rulemaking," George Washington Regulatory Studies Center. http://regulatorystudies.columbian.gwu.edu/opportunities-stakeholder-participation-us-regulation.

Information about regulatory actions is available from a number of sources. Many agencies maintain a "laws and regulations" link on their website, which typically provide information about pending regulations and opportunities for stakeholder participation.[18] The *Federal Register* is the "official daily publication for rules, proposed rules, and notices of Federal agencies and

[15] http://www.law.cornell.edu/wex/clean_air_act_caa.
[16] Although Congress has not enacted climate change legislation, the EPA claims the authority to issue regulations restricting emissions of greenhouse gases on the basis of existing authority in the Clean Air Act.
[17] Eric Biber and Berry Brosi, "Officious Intermeddlers or Citizen Experts? Petitions and Public Production of Information in Environmental Law," *UCLA Law Review*, Vol. 58 (2010), pp. 321-400.
[18] See, for example, the "laws and regulations" link at www.epa.gov.

organizations, as well as executive orders and other presidential documents."[19] Issues of the *Federal Register* are available on the Internet dating back to 1994.[20] The *Unified Agenda of Federal Regulatory and Deregulatory Actions* is an online inventory of forthcoming and ongoing regulatory actions that is updated twice a year.[21] The *Unified Agenda* provides a variety of information about regulatory actions, including title, abstract, legal authority, expected publication dates for notices, regulations, and public comment periods, whether the action is economically significant or expected to affect small entities or international trade and investment, and contact information for the responsible agency personnel. An annual *Regulatory Plan*, published once a year with the fall *Unified Agenda*, provides additional details on agency priorities and significant planned regulatory actions.

Administrative Procedure Act and Public Commenting

Since its enactment in 1946, the Administrative Procedure Act (APA) has served as the legal foundation for stakeholder participation in the development of regulations by agencies of the United States federal government.[22] One of the central elements of the APA is rulemaking via the notice and comment process. Under the APA, agencies are generally required, subject to a number of exemptions, to publish in the *Federal Register* notices of proposed rulemaking, provide stakeholders with opportunities to comment on these notices, and respond to issues raised in comments. These exemptions include when an agency "for good cause finds…that notice and public procedure thereon are impracticable, unnecessary, or contrary to the public interest," as well as agency organizational rules and issues pertaining to military or foreign affairs.[23]

Approximately one-third to one-half of all regulatory actions are issued without prior publication of a notice of proposed rulemaking.[24] Many such exempt actions deal with routine matters and impose minimal burdens. Regulations with significant economic impacts are more likely to be preceded by notices of proposed rulemaking than smaller scale actions.[25] Less than twenty

[19] http://www.ofr.gov/Catalog.aspx?AspxAutoDetectCookieSupport=1.
[20] https://www.federalregister.gov/.
[21] http://www.reginfo.gov/public/do/eAgendaMain.
[22] http://www.archives.gov/federal-register/laws/administrative-procedure/.
[23] http://www.archives.gov/federal-register/laws/administrative-procedure/553.html.
[24] Steven J. Balla, "Between Commenting and Negotiation: The Contours of Public Participation in Agency Rulemaking." *I/S: A Journal of Law and Policy for the Information Society*, Vol. 1, No. 1 (Winter 2004/2005), p. 89. United States Government Accountability Office (GAO), "Federal Rulemaking: Agencies Could Take Additional Steps to Respond to Public Comments," December 2012, p. 8. http://www.gao.gov/assets/660/651052.pdf.
[25] GAO, "Federal Rulemaking: Agencies Could Take Additional Steps to Respond to Public Comments," p. 8.

percent of economically significant actions are exempt from the requirements of the notice and comment process.[26]

For actions with exemptions, agencies may promulgate interim final rules and direct final rules.[27] In the aftermath of a disaster such as a hurricane or terrorist attack, for example, agencies will issue emergency regulatory waivers via interim final rules. With interim final rules, comment periods are held after the action has been promulgated. Agencies are expected to consider public comments and eventually issue a permanent final regulation. Direct final rules are also issued with accompanying comment periods, typically in the context of actions that are not anticipated to provoke controversy. For example, the EPA routinely issues direct final rules to approve revisions to state implementation plans under the Clean Air Act. As long as no adverse comment is received, direct final rules remain in effect. If, however, an adverse comment is submitted, then the agency retracts the rule and follows the notice and comment process.

Although submitting comments in response to notices of proposed rulemaking is the most formal channel for stakeholder engagement in the development of regulations, opportunities exist at other steps in the process as well. These opportunities are summarized in Table 1. Agencies, for example, may solicit public comments prior to rule promulgation in other contexts during the regulatory process.[28] Advance notices of proposed rulemaking provide agencies with opportunities to receive feedback on initial ideas and questions surrounding prospective regulatory actions. Supplemental notices of proposed rulemaking are utilized when agencies seek additional information about specific issues that were not resolved during preceding comment periods.

Table 2: Modes of Stakeholder Participation in the Regulatory Process

Stage in Regulatory Process	Mode of Stakeholder Participation
Authorizing Legislation Must pass both houses of Congress and be signed by the president.	Interested stakeholders may work with elected officials to influence legislation that will authorize regulatory action.
Regulation Initiation The *Unified Agenda* is the official compendium of upcoming federal regulatory activity, published online twice a year.	The Unified Agenda often provides the first public notice of agency activity. It is a searchable electronic database that allows the public to identify upcoming regulations of interest.

[26] Lindsay M. Scherber, "Interim Final Rules Over Time: A Brief Empirical Analysis," George Washington Regulatory Studies Center, September 25, 2014. http://regulatorystudies.columbian.gwu.edu/interim-final-rules-over-time-brief-empirical-analysis.
[27] Carey, "Counting Regulations," p. 13.
[28] Balla, "Between Commenting and Negotiation," p. 79.

Draft Proposal Agencies analyze alternatives and draft a regulatory proposal.	Stakeholder participation on technical basis for regulatory approach is often sought at this stage, sometimes through an Advance Notice of Proposed Rulemaking, or through more targeted inquiries.
Small Entity Impacts Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996	Small entities can participate in panels organized by the Small Business Office of Advocacy to evaluate early draft proposals (applicable to EPA, Occupational Health and Safety Administration, and Consumer Financial Protection Bureau).
Executive Review Executive Order 12866.	Officials at the White House Office of Information and Regulatory Affairs (OIRA) meet with members of the public upon request while a regulation is under interagency review.
Publication in *Federal Register* Regulations.gov contains *Federal Register* notices of proposed rulemaking and final rules, as well as supporting documentation.	Agencies invite public comment on all aspects of regulation. Commenting is not limited to stakeholders. To be considered in final regulation, comments must be filed on the public record, through channels such as Regulations.gov.
Paperwork Burden Assessment Paperwork Reduction Act (PRA) of 1980.	Agencies must seek public comment on "burden" (time and cost) involved in reporting requirements (including information collected to comply with regulations) every three years.
Draft Final Rule	Under the APA, agencies must consider public comments filed on the record during the comment period as they develop their final regulation.
Final Regulatory Review Executive Order 12866.	OIRA review of draft final rule and opportunity for meetings.
Publication of Final Rule	Under the APA, regulations are generally not binding until at least 30 days after publication in the *Federal Register*.
Congressional Review Congressional Review Act of 1996.	Congress can issue a joint resolution of disapproval to overturn a final regulation (very rare).

Judicial Review	Parties affected by rules may seek judicial review of final agency actions.
Retrospective Review	Executive Orders 13563 and 13610 ask agencies to develop plans for analyzing effects of existing regulations and to share plans and analyses with public.

Source: Susan E. Dudley, "Opportunities for Stakeholder Participation in U.S. Rulemaking," George Washington Regulatory Studies Center. http://regulatorystudies.columbian.gwu.edu/opportunities-stakeholder-participation-us-regulation.

Early Stages in the Regulatory Process

The utility of advance notices of proposed rulemaking points to the fact that agencies sometimes spend long periods of time working on regulatory issues before drafting notices of proposed rulemaking. Another indication is that the *Unified Agenda* includes a section for long-term actions, issues for which agencies do not expect to take a regulatory action for at least 12 months.[29] At the EPA, it is not uncommon for nearly two years to elapse between the initiation of a regulatory action and the publication in the *Federal* Register of a notice of proposed rulemaking.[30] In an extreme case, the OSHA announced in 1998 that crystalline silica was among its top regulatory priorities, but did not issue a proposed rule for public comment until 2013.[31]

Early in the regulatory process, agencies conduct analyses required by statutes and executive orders. Such analysis can include regulatory impact analysis of benefits and costs, impacts on small entities,[32] and environmental impact analyses.[33] Agencies often consult with stakeholders prior to the development of notices of proposed rulemaking. In addition to commenting on advance notices of proposed rulemaking, agency officials interact with stakeholders via ex parte communications.[34] According to the APA, ex parte communications consist of "oral or written

[29] http://www.reginfo.gov/public/do/eAgendaHistory?operation=OPERATION_GET_PUBLICATION&showStage=longterm&currentPubId=201404.

[30] Cornelius M. Kerwin and Scott R. Furlong, "Time and Rulemaking: An Empirical Test of Theory," *Journal of Public Administration Research and Theory,* Vol. 2, No. 2 (April 1992), pp. 113-138.

[31] Susan Dudley, "OSHA's Long Awaited Crystalline Silica Rule," *Regulation,* Vol. 37, No. 1 (Spring 2014). p. 7. http://www.cato.org/regulation/spring-2014.

[32] Evaluation of such impacts is required by the RFA. http://www.sba.gov/category/advocacy-navigation-structure/regulatory-flexibility-act.

[33] Such analyses are required by the National Environmental Policy Act of 1969, as amended (Pub. L. 91-190, 42 U.S.C. 4321-4347, January 1, 1970, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, and Pub. L. 97-258, § 4(b), Sept. 13, 1982). http://ceq.hss.doe.gov/laws_and_executive_orders/the_nepa_statute.html.

[34] Esa L. Sferra-Bonistalli, "*Ex Parte* Communications in Informal Rulemaking." http://www.acus.gov/sites/default/files/documents/Final%20Ex%20Parte%20Communications%20in%20Informal%20Rulemaking%20%5B5-1-14%5D_0.pdf.

communication not on the public record with respect to which reasonable prior notice to all parties is not given."[35] An analysis of DOT regulations finds evidence that "ex parte contacts between third parties and agency decision makers do, at times, affect the content of regulatory policy outputs," serving as both "agenda building" and "agenda blocking" mechanisms.[36] Agency policies regarding the acceptance and disclosure of ex parte communications vary widely, with some agencies being rather permissive and others operating under significant restrictions.[37] The Administrative Conference of the United States (ACUS), an agency charged with improving the administrative process, recently observed that "informal communications between agency personnel and individual members of the public have traditionally been an important and valuable aspect of informal rulemaking proceedings conducted under section 4 of the Administrative Procedure Act (APA), 5 U.S.C. § 553," and that they "convey a variety of benefits to both agencies and the public."[38] ACUS also expressed, however, concerns that a lack of transparency could harm the integrity of the regulatory process and recommended that all agencies develop guidelines for handling ex parte communications, including "procedures for ensuring that, after an NPRM has been issued, all substantive written communications are included in the appropriate rulemaking docket."[39]

One systematic manner in which agency officials interact with stakeholders early in the regulatory process is through advisory committees. Advisory committees are organizations composed of members from outside government, charged with "furnishing expert advice, ideas, and diverse opinions" to decision makers in the executive branch.[40] Governed by the Federal Advisory Committee Act (FACA) of 1972, there are approximately one thousand advisory committees currently in operation.[41] The FACA mandates that advisory committees be balanced in membership across different types of stakeholders. For example, the National Drinking Water Advisory Council, which advises the EPA on regulations issued under the Safe Drinking Water Act of 1974, consists of equal numbers of representatives of state and local water agencies, water utilities and other supplier organizations, and the general public.[42] In general, advisory committees provide opportunities for stakeholders to participate in the setting of agency

[35] http://www.archives.gov/federal-register/laws/administrative-procedure/551.html.
[36] Susan Webb Yackee, "The Politics of Ex Parte Lobbying: Pre-Proposal Agenda Building and Blocking during Agency Rulemaking," *Journal of Public Administration Research and Theory,* Vol. 22, No. 2 (April 2012), pp. 373–393. State and federal governments "represent the largest category of ex parte participants at 39%," while business interests and nonbusiness/nongovernmental actors each provide 31 percent of the ex parte communications. Susan Webb Yackee, "The Politics of Ex Parte Lobbying: Pre-Proposal Agenda Building and Blocking during Agency Rulemaking," p. 387.
[37] Sferra-Bonistalli, "*Ex Parte* Communications in Informal Rulemaking," p. 5.
[38] Administrative Conference Recommendation 2014-4, "Ex Parte" Communications in Informal Rulemaking, June 6, 2014. http://www.acus.gov/sites/default/files/documents/Recommendation%202014-4%20%28Ex%20Parte%29_0.pdf.
[39] Administrative Conference Recommendation 2014-4, Recommendation 2.
[40] The Federal Advisory Committee Act, http://www.gsa.gov/graphics/ogp/without_annotations_R2G-b4T_0Z5RDZ-i34K-pR.pdf.
[41] http://www.gsa.gov/portal/content/101010.
[42] http://water.epa.gov/drink/ndwac/.

regulatory agendas and contribute to early discussions regarding the content of notices of proposed rulemaking.[43]

As noted in Table 1, before publication in the *Federal Register*, notices of proposed rulemaking with significant effects on the economy and political system must be reviewed by OIRA, a White House agency located in the Office of Management and Budget.[44] OIRA is charged with assessing regulatory actions on cost-benefit and other analytical grounds, as well as for consistency with presidential priorities. During the course of review, OIRA's policy analysts often suggest that notices be amended to include additional options or questions on which comments will be sought, and sometimes negotiate the length of the public comment period.[45] It is only after OIRA has concluded its review of an agency submission that the action can be published in the *Federal Register*. This review process is required not only for notices of proposed rulemaking, but for final rules as well.

During the review process, OIRA officials accept requests for meetings with interested parties.[46] Such communications most regularly consist of meetings with business firms and industry associations, although meetings with consumers, environmentalists, and NGOs occur as well.[47] It is meetings where both economic interests and broad societal constituencies are represented that exert the most pronounced influence over OIRA's review of regulatory actions.[48]

As highlighted in Table 1, the PRA and SBREFA provide early avenues for stakeholder participation in the development of regulations. The PRA requires agencies to "provide 60-day notice in the Federal Register, and otherwise consult with members of the public and affected agencies concerning each proposed collection of information."[49] Both the issuing agency and OIRA accept public comment on (1) "whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility" and (2) "the accuracy of the agency's estimate of the burden of the proposed collection of information," as well as ways to improve the value of the

[43] Steven J. Balla and John R. Wright, "Interest Groups, Advisory Committees, and Congressional Control of the Bureaucracy," *American Journal of Political Science*, Vol. 45, No. 4 (October 2001), pp. 799-812. Steven J. Balla and John R. Wright, "Can Advisory Committees Facilitate Congressional Oversight of the Bureaucracy?," in *Congress on Display, Congress at Work*, William T. Bianco, ed. (Ann Arbor, MI: University of Michigan Press, 2000), pp. 167-187.

[44] This requirement was established by President Reagan in Executive Order 12991, issued on February 17, 1981 (http://www.archives.gov/federal-register/codification/executive-order/12291.html) and maintained by President Clinton in Executive Order 12866, issued on September 30, 1993 (http://www.archives.gov/federal-register/executive-orders/pdf/12866.pdf).

[45] Authors' experience. Ultimately, it is the courts that determine whether agencies meet notice and comment requirements.

[46] These meetings are governed by the disclosure requirements of Section (6)(b)(4) of Executive Order 12866.

[47] OIRA outside communications are documented at http://www.whitehouse.gov/omb/oira_meetings/.

[48] Steven J. Balla, Jennifer M. Deets, and Forrest Maltzman, "Outside Communications and OIRA Review of Agency Regulations," *Administrative Law Review*, Vol. 63 (2011), p. 166.

[49] http://www.gpo.gov/fdsys/pkg/PLAW-104publ13/html/PLAW-104publ13.htm.

information or minimize reporting burdens.[50] Agencies must receive approval from OIRA, in the form of a control number, before collecting information from ten or more members of the public, and must renew control numbers at least every three years.[51]

The SBREFA requires that two agencies—EPA and OSHA—receive input from affected small businesses through the Small Business Office of Advocacy before publishing notices of proposed rulemaking. The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 added the newly-created CFPB to the agencies subject to such Small Business Advocacy Reviews (SBARs).[52] When a prospective regulation is expected to have a significant impact on a substantial number of small entities, SBREFA requires the EPA, OSHA and CFPB to convene a SBAR panel with representatives from the agency, OIRA, and the Office of Advocacy to review the proposed rule and related agency analyses. The panel also solicits advice from small business representatives and prepares a report. This report must be considered during the development of the regulation and must be included in the public record of the rulemaking.[53]

Post-Promulgation Stakeholder Participation

Regulations do not typically take effect for at least thirty days after publication in the *Federal Register*. Congress requires that this duration be at least sixty days for major rules.[54] Agencies must submit completed regulatory actions to the GAO and Congress at the time they are sent to the *Federal Register*.[55] Congress has the authority to enact a joint resolution of disapproval under expedited procedures in the sixty working days following the receipt of a regulatory action.[56] Although only one action, a DOL regulation on ergonomics, has been nullified by the enactment of a resolution of disapproval,[57] Congress has introduced dozens of resolutions of disapproval.[58]

[50] 44 U.S.C §3506(c)(2)(A).
[51] 44 U.S.C. §3507(a)(3).
[52] The Small Business Office of Advocacy lists SBAR consultations on its website. http://www.sba.gov/category/advocacy-navigation-structure/regulatory-policy/regulatory-flexibility-act/sbrefa.
[53] Susan E. Dudley and Jerry Brito, *Regulation: A Primer*, The George Washington University Regulatory Studies Center and the Mercatus Center at George Mason University, August 2012. https://regulatorystudies.columbian.gwu.edu/sites/regulatorystudies.columbian.gwu.edu/files/downloads/RegulatoryPrimer_DudleyBrito.pdf.
[54] This requirement is articulated in the Congressional Review Act (CRA) of 1996. http://www.law.cornell.edu/uscode/text/5/part-I/chapter-8. Major rules are similar to economically significant rules, in that one defining characteristic is an expected annual impact on the economy of at least $100 million. http://www.gao.gov/legal/congressact/cra_faq.html#3.
[55] Agencies do not always comply with this requirement. Curtis W. Copeland, "Congressional Review Act: Many Recent Final Rules Were Not Submitted to GAO and Congress." http://www.acus.gov/sites/default/files/documents/CRA%20Report%200725%20%282%29.pdf.
[56] This authority is provided in the CRA.
[57] http://www.gao.gov/legal/congressact/cra_faq.html.
[58] http://www.gao.gov/legal/congressact/cra_faq.html.

In some instances, the threat of passage of a resolution of disapproval has compelled agencies to modify regulatory actions.[59]

Stakeholders commonly seek redress from the courts regarding the requirements of regulatory actions. For example, approximately one-fourth of EPA regulations are challenged on legal grounds.[60] The APA allows courts to set aside agency actions on a number of grounds.[61] These criteria include actions that are arbitrary and capricious, unconstitutional, exceed statutory authority, and not developed in accordance with procedural requirements.[62] Judicial review places great emphasis on the administrative record developed by the agency during the regulatory process, including its analyses and consideration of public comments.[63] Under judicial review, regulations are often remanded to agencies for reconsideration.

The APA provides stakeholders with the opportunity to petition agencies to issue, amend, or repeal regulatory actions.[64] Agencies are expected to establish procedures for receiving, considering, and responding to stakeholder petitions.[65] Little is known about stakeholder and agency practices with respect to submitting and addressing petitions.[66]

Evolution of the Notice and Comment Process

The notice and comment process has been called one of the "greatest inventions of modern government."[67] By mandating that agencies give public notice in advance of the promulgation of regulations, the APA institutionalizes a measure of transparency in the rulemaking process. By allowing interested parties to submit comments on agency proposals, the APA establishes a participatory environment grounded in principles such as openness and fairness.

Over the decades, the notice and comment process has evolved considerably. Although the basic template of agency notice and public comment remains, additional elements have been superimposed on APA requirements. These elements have been instituted through judicial decisions, congressional legislation, and presidential executive orders. The APA's general

[59] Steven J. Balla, "Legislative Organization and Congressional Review of Agency Regulations," *Journal of law, Economics, and Organization*, Vol. 16, No. 2 (Fall 2000), pp. 424-448.
[60] Cary Coglianese, "Assessing Consensus: The Promise and Performance of Negotiated Rulemaking," *Duke Law Journal*, Vol. 46, No. 6 (April 1997), p. 1298
[61] Dudley and Brito, *Regulation: A Primer*, pp. 48-50.
[62] http://www.law.cornell.edu/uscode/text/5/706.
[63] Leland E. Beck, "Agency Practices and Judicial Review of Administrative Records in Informal Rulemaking." http://www.acus.gov/sites/default/files/documents/Agency%20Practices%20and%20Judicial%20Review%20of%20Administrative%20Records%20in%20Informal%20Rulemaking.pdf.
[64] http://www.archives.gov/federal-register/laws/administrative-procedure/553.html.
[65] http://www.acus.gov/sites/default/files/documents/86-6.pdf.
[66] ACUS is currently investigating issues in petitioning. http://www.acus.gov/research-projects/petitions-rulemaking.
[67] Kenneth Culp Davis, *Discretionary Justice: A Preliminary Inquiry* (Urbana, IL: University of Illinois Press, 1976), p. 65.

requirement that agencies solicit public comments on notices of proposed rulemaking has been interpreted by the courts to imply that agencies must respond to comments passing a "threshold requirement of materiality."[68] Congress, in the Regulatory Flexibility Act (RFA), mandated that agencies prepare analyses for all significant rules, describing their impact on small businesses and exploring less burdensome alternatives.[69] OIRA regulatory review has been called one of the most important developments in contemporary administrative law and process.[70]

By some accounts, these developments have transformed the "flexible and efficient" process created by the APA into a "rigid and burdensome" endeavor.[71] According to this view, it is not uncommon for agencies to spend years crafting actions that pass judicial, congressional, and presidential muster.[72] Despite such examples, it is nevertheless the case that agencies continue to issue rules at an overall pace that has not appreciably slowed down over the decades.[73]

One way in which agencies take actions outside of the notice and comment process is through channels such as the issuance of guidance documents. The APA exempts from its notice and comment procedures "interpretive rules" and "policy statements." While such documents do not carry the force of law and are not legally binding, they are often binding in practical effect.[74] Through guidance documents, agencies offer stakeholders advice regarding how to interpret existing regulatory requirements and implementation practices.[75] Because they have historically not been subject to APA requirements, guidance documents have provided agencies with opportunities to take actions that may have binding effects outside of the notice and comment process under circumstances in which stakeholder scrutiny, as epitomized by the submission of large numbers of comments on notices of proposed rulemaking, is most pronounced.[76] This opportunity to evade the notice and comment process has been somewhat reduced in recent

[68] Thomas O. McGarity, "Some Thoughts on 'Deossifying' the Rulemaking Process," *Duke Law Journal,* Vol. 41, No. 6 (June 1992), p. 1400.
[69] The text of the RFA can be accessed at http://www.gpo.gov/fdsys/pkg/STATUTE-94/pdf/STATUTE-94-Pg1164.pdf.
[70] Richard H. Pildes and Cass R. Sunstein, "Reinventing the Regulatory State," *University of Chicago Law Review,* Vol. 62, No. 1 (Winter 1995), p.3.
[71] McGarity, "Some Thoughts on 'Deossifying' the Rulemaking Process," p. 1385.
[72] McGarity, "Some Thoughts on 'Deossifying' the Rulemaking Process," pp. 1387-1391.
[73] Jason Webb Yackee and Susan Webb Yackee, "Administrative Procedures and Bureaucratic Performance: Is Federal Rule-making 'Ossified?'" *Journal of Public Administrative Research and Theory,* Vol. 20, No. 2 (April 2010), pp. 261-282. The George Washington University Regulatory Studies Center provides various statistics on trends in regulatory activity. http://regulatorystudies.columbian.gwu.edu/reg-stats.
[74] Dudley and Brito, *Regulation: A Primer,* pp. 38-39.
[75] White House Office of Management and Budget, "Final Bulletin for Agency Good Guidance Practices." http://www.whitehouse.gov/sites/default/files/omb/memoranda/fy2007/m07-07.pdf.
[76] James T. Hamilton and Christopher H. Schroeder, "Strategic Regulators and the Choice of Rulemaking Procedures: The Selection of Formal vs. Informal Rules in Regulating Hazardous Waste," *Law and Contemporary Problems,* Vol. 57, No. 2 (Spring 1994), pp. 111-160.

years, ever since President George W. Bush mandated that guidance documents with particularly large economic impacts be subject to APA requirements before taking effect.[77]

Operation of Public Commenting

Given the sustained centrality of the notice and comment process as a means of stakeholder participation in the regulatory process, it is important to consider a number of facets of the operation of public commenting. These facets include both agency and stakeholder behavior in establishing and utilizing comment periods.

Submission and Posting of Comments

Historically, stakeholders have submitted public comments to agencies via postal mail and in-person delivery. Such traditional modes of communication continue to be utilized in the notice and comment process. For example, in a notice of proposed rulemaking published in the *Federal Register* on October 6, 2014, the EPA provided stakeholders with an array of options for submitting comments on emissions standards for ferroalloys production.[78] These options included mail, fax, and hand/courier delivery. Executive Order 13563, issued by President Obama on January 18, 2011, encourages agencies to make use of the Internet in accepting comments.[79] Consistent with this encouragement, stakeholders could also choose to submit comments on proposed ferroalloys standards through Regulations.gov or a designated EPA email address.

Agencies vary in their practices for accepting public comments. Two agencies other than the EPA published proposed rules in the *Federal Register* on October 6, 2014. One of these agencies, the USDA's Agricultural Marketing Service (AMS), provided stakeholders with three options—mail, fax, and regulations,gov.[80] Another agency, the National Aeronautics and Space Administration, instructed stakeholders that comments must be submitted through Regulations.gov.[81]

Executive Order 13563 also calls for an "open exchange" of information, whereby the views of participants in regulatory processes, including individuals and organizations that submit comments on proposed rules, are made public prior to the finalizing of agency decisions.

[77] White House Office of Management and Budget, "Final Bulletin for Agency Good Guidance Practices." http://www.whitehouse.gov/sites/default/files/omb/memoranda/fy2007/m07-07.pdf.
[78] https://www.federalregister.gov/articles/2014/10/06/2014-23266/national-emission-standards-for-hazardous-air-pollutants-ferroalloys-production.
[79] www.gpo.gov/fdsys/pkg/FR-2011-01-21/pdf/2011-1385.pdf.
[80] https://www.federalregister.gov/articles/2014/10/06/2014-23739/patents-and-other-intellectual-property-rights#addresses.
[81] https://www.federalregister.gov/articles/2014/10/06/2014-23739/patents-and-other-intellectual-property-rights#addresses.

Agencies typically make comments available to the public through two main mechanisms. Comments submitted to the EPA can be viewed over the Internet via Regulations.gov or in hard copy at the agency's docket in Washington, DC.[82] The same holds for comments submitted to the AMS.[83]

Duration of Comment Periods

The APA does not establish a statutory requirement regarding the minimum length of time that comment periods are to remain open. Executive Order 12866 defines a "meaningful opportunity" to comment on most significant agency notices as a period of "not less than 60 days."[84] Reaffirming this principle, President Obama, Executive Order 13563, has called for comment periods to last for "at least 60 days."[85]

Despite these underlying expectations, neither executive order mandates sixty-day comment periods in all circumstances. For example, Executive Order 13563 encourages comment periods to last for sixty days "to the extent feasible and permitted by law."[86] Given the prevalence of legal deadlines and other situations in which agencies face internal or external impetus for expedited action, the duration of comment periods varies substantially across agencies and regulatory processes.[87]

Some agencies state a standard operating procedure of offering comment periods of more than sixty days. According to the EPA, comment periods on its notices typically last sixty to ninety days.[88] The DOT's policy is to allow for comment periods of sixty days or longer and provide justifications for periods of shorter duration.[89] Despite such statements by certain agencies, the average duration of comment periods across federal agencies is 39 days, short of the sixty day minimum period called for by recent presidents.[90] The average duration of the comment periods for notices of proposed rulemaking that are economically significant is 45 days.[91]

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[82] https://www.federalregister.gov/articles/2014/10/06/2014-23266/national-emission-standards-for-hazardous-air-pollutants-ferroalloys-production.

[83] https://www.federalregister.gov/articles/2014/10/06/2014-23524/irish-potatoes-grown-in-colorado-and-imported-irish-potatoes-relaxation-of-the-handling-regulation.

[84] http://www.archives.gov/federal-register/executive-orders/pdf/12866.pdf.

[85] www.gpo.gov/fdsys/pkg/FR-2011-01-21/pdf/2011-1385.pdf.

[86] www.gpo.gov/fdsys/pkg/FR-2011-01-21/pdf/2011-1385.pdf.

[87] https://www.federalregister.gov/uploads/2011/01/the_rulemaking_process.pdf.

[88] Environmental Protection Agency, "Developing Regulations: From Start to Finish." http://www.epa.gov/lawsregs/brochure/developing.html.

[89] United States Department of Transportation, "The Informal Rulemaking Process." http://regs.dot.gov/informalruleprocess.htm#What%20are%20the%20legal%20requirements%20for%20the%20informal%20rulemaking%20process.

[90] Steven J. Balla, "Public Commenting on Federal Agency Regulations: Research on Current Practices and Recommendations to the Administrative Conference of the United States," p. 5. http://www.acus.gov/sites/default/files/documents/Consolidated-Reports-%2B-Memoranda.pdf.

[91] Steven J. Balla, "Brief Report on Economically Significant Rules and the Duration of Comment Periods." http://www.acus.gov/sites/default/files/documents/COR-Balla-Supplemental-Research-Brief.pdf.

Volume of Public Comments

Given the current environment within which regulations are developed, to what extent does public commenting on notices of proposed rulemaking occur? On occasion, stakeholders collectively submit hundreds of thousands or millions of comments in response to agency notices. For example, the Food and Drug Administration's notice of proposed rulemaking defining tobacco to include smokeless tobacco and other products received 79,286 public comments.[92] The Federal Communications Commission (FCC) received well over one million comments on its proposed net neutrality regulation.[93] The EPA received 2.5 million comments on its proposal to regulation greenhouse gas emissions from electric generating units.[94]

Apart from such atypical high-volume regulatory proceedings, to what extent do stakeholders submit comments in response to agency notices? Notices of proposed rulemaking for the most part generate fairly limited numbers of comments. For example, the Department of Energy's notice of proposed rulemaking setting energy conservation standards for dishwashers, while considered economically significant, received seventy comments.[95] A seminal analysis of 11 rules issued by three agencies during the Clinton administration reveals that no notice of proposed rulemaking received more than 268 comments.[96] The median number of comments submitted on these rules was 12. Other studies of public commenting have uncovered similar results. An analysis of 42 rules issued by 14 agencies in 1996 finds that the median number of comments submitted in response to the notices of proposed rulemaking was 19.[97] An analysis of 463 actions completed by the DOT during two three-year periods—1995-1997 and 2001-2003—reveals that a median number of 13 comments were submitted in response to the notices of proposed rulemaking.[98] In recent years, information and communication technologies (ICTs) have made it much easier for the stakeholders to comment on proposed regulations, which may lead to a substantial increase in the volume of comments. Such possibilities are addressed later in report.

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[92] An analysis of these comments is available through Docket Wrench, which builds on information in Regulations.gov to allow users to view comments, the timeline of comment submission, and commonality among comments. http://docketwrench.sunlightfoundation.com/docket/FDA-2014-N-0189.

[93] Gautham Nagesh, "Federal Agencies Are Flooded by Comments on New Rules." http://online.wsj.com/articles/federal-agencies-are-flooded-by-comments-on-new-rules-1409786480.

[94] Environmental Protection Agency, "Withdrawal of Proposed Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units," *Federal Register,* Vol. 79, No. 5 (January 8, 2014), pp. 1352-1354.

[95] http://docketwrench.sunlightfoundation.com/docket/EERE-2010-BT-STD-0011.

[96] Marissa Martino Golden, "Interest Groups in the Rulemaking Process: Who Participates? Whose Voices Get Heard?" *Journal of Public Administration Research and Theory,* Vol. 8, No.2 (April 1998), p. 252.

[97] William F. West, "Formal Procedures, Informal Processes, Accountability, and Responsiveness in Bureaucratic Policy Making: An Institutional Analysis," *Public Administration Review,* Vol. 64, No. 1 (January/February 2004), p. 79.

[98] Steven J. Balla and Benjamin M. Daniels, "Information Technology and Public Commenting on Agency Regulations," *Regulation & Governance,* 1 (2007), p. 57.

Participation across Types of Stakeholders

In addition to overall levels of commenting, a salient facet of the notice and comment process is variation in the propensity to comment across types of stakeholders. A central issue in this regard is the extent to which regulated entities and industry interests are more active in commenting than consumers, environmentalists, and NGOs. Evidence suggests that although business organizations are in certain contexts more active than other segments of society, it is not uncommon for agencies to receive comments from diverse arrays of stakeholders.

The aforementioned analysis of 11 rules issued by three agencies during the Clinton administration reveals that business participation is not uniformly higher than commenting by other types of stakeholders.[99] For rules issued by the EPA and National Highway Traffic Safety Administration, industry interests submitted between two-thirds and one-hundred percent of the comments on the respective notices of proposed rulemaking. For the majority of these agency notices, representatives of citizen interests did not submit a single comment. By contrast, notices of proposed rulemaking circulated by the Department of Housing and Urban Development resulted in the submission of relatively large numbers of comments by citizen advocacy and other NGOs, with minimal participation on the part of corporations, trade associations, and business coalitions. Similarly, an analysis of thirty notices of proposed rulemaking issued by agencies inside the DOT and DOL finds that businesses submitted over 57 percent of the comments.[100] Nonbusiness and non-governmental interests, by way of comparison, accounted for 22 percent of the comments.

More recently, there are instances in which notices of proposed rulemaking have generated large numbers of comments from consumers, environmentalists, and NGOs. For example, more than half of the comments EPA received on its 2012 proposal to limit greenhouse gas emissions from electric utility generators were submitted by individuals and environmental organizations arguing in support of stricter standards.[101] OSHA received 1,675 comments on its proposed lowering of permissible exposure levels for crystalline silica, about one quarter of which were submitted by construction industry employers and employees objecting to the stringency of the proposal.[102]

Timing of Comment Submission

It is often asserted that stakeholders typically wait until immediately before the close of comment periods to submit comments to agencies. As one expert has noted, interested parties "often are large organizations, which may need time to coordinate an organizational response or to

[99] Golden, "Interest Groups in the Rulemaking Process: Who Participates? Whose Voices Get Heard?"
[100] Jason Webb Yackee and Susan Webb Yackee, "A Bias Towards Business?: Assessing Interest Group Influence on the U.S. Bureaucracy." *Journal of Politics*, Vol. 68, No. 1 (February 2006), p. 133.
[101] http://docketwrench.sunlightfoundation.com/docket/EPA-HQ-OAR-2011-0660/similarity/cutoff-50/document-13826.
[102] http://docketwrench.sunlightfoundation.com/docket/OSHA-2010-0034/similarity/cutoff-90/document-1026.

authorize expenditure of funds to do the research needed to produce informed comments."[103] Comments that are submitted immediately prior to the close of comment periods are naturally shielded from the scrutiny of other stakeholders, including opposing interests that might subsequently communicate substantive criticisms to agency decision makers. Although exposed to such criticisms, comments submitted at the outset of comment periods offer stakeholders the opportunity to set the agenda and influence the nature of the arguments and evidence that are considered by agency decision makers during comment periods.

Research demonstrates that the largest single concentration of submissions occurs on the day that comment periods close.[104] Approximately one-fifth of comments are submitted on closing days. One-third of comments are submitted on closing days and the three days prior to the close of comment periods. On the other extreme, about twenty percent of submissions are filed fifty days or more in advance of comment deadlines.

These percentages vary across types of stakeholders.[105] Approximately one-fourth of comments filed by individuals are submitted on closing days and one of the three days prior to the closing of comment periods. For comments submitted by organizations, fifty percent of submissions were filed on one of these days.

Circulation of Comments and Reply Comment Periods

One limitation of stakeholder participation through commenting on notices of proposed rulemaking is that communication is limited to the provision of information on the part of stakeholders to agency decision makers. Two approaches to facilitate deliberative engagement within the notice and comment process consist of the timely circulation of comments and the utilization of reply comment periods.

The timely circulation of comments during comment periods provides stakeholders with opportunities to examine and respond to arguments and evidence that have been submitted by other stakeholders. The DOT aims to post comments within eight working hours of submission to Regulations.gov.[106] Other agencies, such as the FCC, share the aim of posting comments to the Internet in short order after submission.[107]

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[103] Jeffrey S. Lubbers, *A Guide to Federal Agency Rulemaking*, 4th ed. (Chicago: American Bar Association, 2006), p. 297.
[104] Balla, "Public Commenting on Federal Agency Regulations: Research on Current Practices and Recommendations to the Administrative Conference of the United States," p.31.
[105] Balla, "Public Commenting on Federal Agency Regulations: Research on Current Practices and Recommendations to the Administrative Conference of the United States," p.31.
[106] http://www.regulations.gov/#!home.
[107] Balla, "Public Commenting on Federal Agency Regulations: Research on Current Practices and Recommendations to the Administrative Conference of the United States," p.15.

An analysis of the posting of comments demonstrates that the average comment is posted to Regulations.gov in 14 days.[108] Approximately one-fourth of comments are posted either on the day the agency received them or on the following day. More than half of comments are posted within a week of submission. Agencies vary substantially in the timeliness of posting comments. The average DOT comment is posted within four days. By contrast, the Animal and Plant Health Inspection Service, an agency in the USDA, typically posts comments within eight days. For the EPA, the mean posting duration is 38 days.

Agencies on occasion provide stakeholders with opportunities to submit comments during reply comment periods. Reply comment periods are specified intervals of stakeholder participation that extend beyond the closing dates of comment periods attached to notices of proposed rulemaking. The aim of reply comment periods is to circulate information that stakeholders have previously submitted and solicit responses to this information from other stakeholders. With respect to such circulation, it has been asserted that "comments are much more likely to be focused and useful if the commenters have access to the comments of others."[109]

According to FCC officials who have direct experience with reply comment periods, reply comment periods encourage the submission of initial comments that provide decision makers with accurate information about stakeholder preferences.[110] For example, given the presence of reply comment periods, stakeholders are less likely to submit initial comments that make maximalist claims. In other words, stakeholders are more likely to directly state which of their arguments and evidence are most crucial to their immediate interests and which points are simply their preferred outcomes in an ideal world. The reason for such differentiation is that reply comment periods open initial submissions up to the possibility of being challenged on factual and analytical grounds. When it comes to reply comments themselves, FCC officials make the argument that these submissions are often more immediately useful than initial comments in that it is during reply periods when issues are narrowed to their most essential elements.

Impact of Public Comments

Research demonstrates that there are instances in which public comments exert significant influence over agency decision making. In a regulatory action on the marketing of organic products, the USDA instituted wholesale changes after receiving hundreds of thousands of comments on its notice of proposed rulemaking.[111] According to the Secretary of Agriculture, "If organic farmers and consumers reject our national standards, we have failed."[112]

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[108] Steven J. Balla, "Procedural Control, Bureaucratic Discretion, and Public Commenting on Agency Regulations," *Public Administration,* forthcoming.
[109] Lubbers, *A Guide to Federal Agency Rulemaking,* p. 321.
[110] Balla, "Public Commenting on Federal Agency Regulations: Research on Current Practices and Recommendations to the Administrative Conference of the United States," p.12.
[111] Shulman, "An Experiment in Digital Government at the United States National Organic Program," p. 255.
[112] Shulman, "An Experiment in Digital Government at the United States National Organic Program," p. 255.

An analysis of three regulatory actions taken by the Federal Election Commission, Nuclear Regulatory Commission, and Department of the Treasury reveals that agency responsiveness occurs in proportion to the sophistication of the information contained in comments.[113] Sophisticated comments are distinguished by a number of characteristics, including knowledge about the statutory underpinnings of regulatory actions and provision of logical arguments and legal, policy, and empirical information that is directly relevant to the comments being submitted.

This finding that agency decision makers routinely respond to sophisticated comments naturally begs the question of the magnitude of agency responsiveness. As a general matter, the changes that agencies make to proposed rules in response to comments "tend to be small and painful, and they are often subtractive rather than innovative or additive."[114] The aforementioned analysis of 11 rules issued by three agencies during the Clinton administration reveals that although most proposed rules were altered in some way, only one notice changed in a manner that can reasonably be considered significant.[115] Other research finds that wholesale changes in proposed rules were unusual during the administrations of Bill Clinton and George W. Bush.[116]

The evidence is mixed regarding the extent to which comments filed by regulated entities and industry interests exert greater influence over agency decision making than arguments and evidence submitted by consumers, environmentalists, and NGOs. Some research finds that "undue business influence" is not generally manifested in the commenting process.[117] One reason for such limited influence is that business interests are frequently internally divided and therefore do not exert unambiguous pressure on agency decision makers. Other research, in contrast, reveals that "agencies appear to alter final rules to suit the expressed desires of business commenters, but do not appear to alter rules to match the expressed preferences of other kinds of interests."[118] Such differences may be a function of the relative sophistication of comments submitted by different types of stakeholders, rather than a direct reflection of commenter identity.

[113] Mariano-Florentino Cuellar, "Rethinking Regulatory Democracy," *Administrative Law Review*, 57 (2005), p. 414.
[114] West, "Formal Procedures, Informal Processes, Accountability, and Responsiveness in Bureaucratic Policy Making: An Institutional Analysis," p. 67.
[115] Golden, "Interest Groups in the Rulemaking Process: Who Participates? Whose Voices Get Heard?," p. 260.
[116] Stuart Shapiro, "Presidents and Process: A Comparison of the Regulatory Process Under the Clinton and Bush (43) Administrations," *Journal of Law and Politics*, 23 (2007).
[117] Golden, "Interest Groups in the Rulemaking Process: Who Participates? Whose Voices Get Heard?," p. 262.
[118] Yackee and Yackee, "A Bias Towards Business?: Assessing Interest Group Influence on the U.S. Bureaucracy," p. 135.

Innovations in Stakeholder Participation

In recent decades, two innovations in the regulatory process have promised to fundamentally transform stakeholder participation. These instruments are negotiated rulemaking and ICTs. For both instruments, experiences have not unambiguously corresponded with expectations.

Negotiated Rulemaking

A central limitation of stakeholder participation through commenting on notices of proposed rulemaking is that comments are submitted relatively late in the process, after agency proposals have been developed and decision maker positions have hardened.[119] One approach to soliciting stakeholder participation earlier in the regulatory process, and making participation more deliberative and deeply engaged, is through negotiated rulemaking.[120] In negotiated rulemaking, which is codified in the Negotiated Rulemaking Act of 1996,[121] agencies publish a notice in the *Federal Register* establishing a negotiated rulemaking committee that is charged with reaching a consensus on a proposed rule. Stakeholders respond to agency notices by applying for membership on negotiated rulemaking committees, which typically consist of no more than twenty-five members. Once the agency constitutes a negotiated rulemaking, committee members are charged with crafting a proposed rule that enjoys unanimous consent among the membership. Once the committee reaches a consensus, the agency then publishes the negotiated agreement as a notice of proposed rulemaking. This notice is then subject to the ordinary notice and comment process.

One presumed advantage of negotiated rulemaking is that subsequent notice and comment processes will pass quickly and uneventfully. Given that stakeholders engage in collective deliberation as a means of generating notices of proposed rulemaking, comment periods are expected to generate few deeply critical comments and, as a result, agencies should experience little difficulty in finalizing regulatory actions. In terms of specific metrics, it is expected that negotiated rules are associated with comment periods of relatively short duration and are subject to relatively little litigation after promulgation.[122]

In some respects, experiences with negotiated rulemaking have been positive. For example, stakeholders give negotiated rulemaking strong marks in terms of generating high quality

[119] As noted earlier, stakeholders regularly engage with agencies before proposals are issued for notice and comment. These interactions, however, can be less transparent than communications during the comment periods, and may influence regulatory decisions before other stakeholders have had the opportunity to submit comments.

[120] Negotiated rulemaking is also known as regulatory negotiation, or "reg neg."

[121] http://www.epa.gov/adr/regnegact.pdf.

[122] Philip J. Harter, "Negotiating Regulations: A Cure for the Malaise, "*Georgetown Law Journal*, Vol. 71 (October 1982).

information and increasing stakeholder learning during the regulatory process.[123] The benefits of deliberative engagement are apparent in that stakeholders, after participating in negotiated rulemaking, better understand the complexities of government decision making and positions taken by other stakeholders.[124] Despite these benefits, there is little evidence that negotiated rulemaking reduces either the time it takes agencies to develop regulations or the prevalence of stakeholder litigation after the promulgation of regulations.[125]

Over the decades, agencies have not utilized negotiated rulemaking on a regular basis, in part because of the relatively high costs to stakeholders and agency decision makers of arranging and participating in negotiations.[126] Furthermore, OIRA officials have generally resisted negotiated rulemaking, due to concerns that this approach to developing regulations might diminish OIRA's ability to hold agencies accountable for meeting analytical requirements.[127] OIRA has also been concerned that not all types of stakeholders might be present on negotiated rulemaking committees, thereby undermining the representativeness of the process.

Information and Communication Technology

Given the continued importance of the notice and comment process as a primary institutionalized vehicle for stakeholder participation, attention has turned in the last several decades to the possibility of ICTs in bringing about change in the regulatory process. From one viewpoint, the Internet holds the promise of facilitating participation, both as a means of information participation and stakeholder engagement in deliberative decision making.[128] As one policymaker put it, "technology throws open the doors of a government relationship to every American with an opinion to express. E-rulemaking will democratize an often closed process and enable every interested citizen to participate in shaping the rules which affect us all."[129] In contrast, others are concerned that the Internet will have pernicious effects on the regulatory process, by devolving into a costly and counterproductive cycle of "notice and spam."[130] Still

[123] Laura Langbein and Cornelius Kerwin, "Regulatory Negotiation: Claims, Counter Claims, and Empirical Evidence," *Journal of Public Administration Research and Theory,* Vol. 10 (July 2000).
[124] Laura Langbein and Jody Freeman, "Regulatory Negotiation and the Legitimacy Benefit," *New York University Environmental Law Journal,* Vol. 9 (2008).
[125] Coglianese, "Assessing Consensus: The Promise and Performance of Negotiated Rulemaking," pp. 1255-134.
[126] Jeffrey Lubbers, "Achieving Policymaking Consensus: The Unfortunate Waning of Negotiated Rulemaking," *South Texas Law Review,* Vol. 49 (2008). Cornelius M. Kerwin and Scott R. Furlong, *Rulemaking: How Government Agencies Write Law and Make Policy*, 4th edition (Washington, DC: CQ Press, 2011).
[127] George Washington University Regulatory Studies Center and the Bertelsmann Stiftung, "Engaging Stakeholders in Designing Regulation," February 28, 2011. http://regulatorystudies.columbian.gwu.edu/sites/regulatorystudies.columbian.gwu.edu/files/downloads/20110207irrcreport.pdf.
[128] Coglianese, "The Internet and Citizen Participation in Rulemaking."
[129] Balla and Daniels, "Information Technology and Public Commenting on Agency Regulations," p. 47.
[130] Beth Simone Noveck, "The Electronic Revolution in Rulemaking," *Emory Law Journal,* Vol. 53 (2004), p. 441.

others suggest that the relationship between technology and the regulatory process is likely to vary systematically across regulatory and participatory contexts.[131]

In assessing the relationship between technology and the regulatory process, it is crucial to distinguish between two broad classes of ICTs. One class digitizes existing paper-based processes.[132] Notices of proposed rulemaking and final rules, for example, have for years been accessible through the *Federal Register's* online portal.[133] Prior to the mid-1990s, however, the *Federal Register* was publicly available only at libraries that subscribed to the hard copy of the daily publication. Similarly, contemporary public commenting mainly occurs through online portals such as agency websites and Regulations.gov, in contrast to earlier eras in which comments were delivered to agencies via courier and postal mail. In these regards, ICTs that have digitized existing functions have greatly enhanced public access to the regulatory process, as well as the ability of stakeholders to participate in agency decision making.

The other class of ICTs transforms the nature of aspects of the regulatory process.[134] Such transformations occur, for example, by incorporating new stakeholders into the regulatory process and deepening the deliberative engagement of participating stakeholders. In this regard, there is substantial uncertainty concerning the transformational effects of ICTs. When the DOT moved its commenting submission and storage system online, the total number of comments received by the agency increased dramatically.[135] This increase, however, was mainly driven by the presence of two outlying notices of proposed rulemaking that each received tens of thousands of comments through the mail and over the Internet.[136] When the submission of comments is compared more generally across the pre-Internet and post-Internet periods, the overall distributions of comments are strikingly similar. The median number of comments is 12 in the pre-Internet period and 13 in the post-Internet period. Most notices of proposed rulemaking in both periods received one hundred or fewer comments.[137]

In general, the primary impact of ICTs on comment volume is manifested in the context of notices of proposed rulemaking that receive unusually large numbers of comments. In previous eras, mass comment campaigns of tens or hundreds of thousands of comments occurred on occasion. For example, in 1991, the Health Care Financing Administration published in the *Federal Register* a proposed schedule of fees for Medicare physician services.[138] Approximately

[131] Peter M. Shane, "Introduction: The Prospects for Electronic Democracy," in Peter M. Shane, ed., *Democracy Online: The Prospects for Political Renewal Through the Internet* (New York: Routledge), pp. xi-xx.
[132] Coglianese, "The Internet and Citizen Participation in Rulemaking," p. 41.
[133] https://www.federalregister.gov/.
[134] Coglianese, "The Internet and Citizen Participation in Rulemaking," p. 43.
[135] Cindy Skrzycki, "U.S. Opens Online Portal in rulemaking: Web Site Invites Wider participation in the Regulatory Process," *Washington Post*, January 23, 2003.
[136] Balla and Daniels, "Information Technology and Public Commenting on Agency Regulations."
[137] Balla and Daniels, "Information Technology and Public Commenting on Agency Regulations."
[138] Health Care Financing Administration, "Medicare Program; Fee Schedule for Physicians Services," *Federal Register*, June 5, 1991, 25792-25978.

95,000 comments were received in response to this notice.[139] More recently, as highlighted earlier, agencies including the EPA and FCC have received more than one million comments on especially salient regulatory actions.

ICTs have not fundamentally transformed the deliberative nature of stakeholder participation in the notice and comment process. Research suggests that electronic comments are not more deliberative—as measured by elements such as seeking out information, reviewing the comments of other stakeholders, and changing established positions—than traditional, paper-based comments.[140] A lack of deliberation is particularly apparent in mass comment campaigns that are initiated, both offline and online, by organized interest groups.

In recent years, a number of projects have sought to transform the notice and comment process and how public commenting is analyzed in more fundamental ways. For example, Regulations.gov offers application programming interfaces (APIs) for regulatory documents and dockets.[141] These APIs enable users to develop applications that are integrated with regualtions.gov. Such applications hold the promise of enhancing the "way the public discovers, understands, and participates in the federal regulatory process using agencies' regulatory documents, and the related public comments submitted during the regulatory process."[142] Docket Wrench, a project of the Sunlight Foundation, is one such application. Docket Wrench enables users to search millions of regulatory documents. By grouping textually similar documents together, Docket Wrench facilitates distinguishing unique, substantive comments from duplicative comments that are part of mass comment campaigns organized by interest groups.[143]

Agencies make regular use of social media such as Facebook and Twitter during the course of regulatory processes. For example, thousands of social media accounts are registered to agencies, and the EPA alone operates dozens of pages and feeds.[144] This turn toward Web 2.0 has been encouraged by President Obama's Open Government Memorandum, which acknowledges that knowledge is "widely dispersed in society, and public officials benefit from having access to that dispersed knowledge."[145] In practice, however, agency efforts generally fall well short of the social media ideal, in that Facebook pages and Twitter feeds are oriented toward the transmission of agency information.[146] Agencies, in other words, devote little social media attention to

[139] Steven J. Balla, "Administrative Procedures and Political Control of the Bureaucracy," *American Political Science Review*, 92 (1998), p. 666.
[140] David Schlosberg, Stephen Zavestoski, and Stuart W. Shulman, "Democracy and E-Rulemaking: Web-Based Technologies, Participation, and the Potential for Deliberation," *Journal of Information Technology and Politics*, Vol. 4, No. 1 (2007), pp. 37-55.
[141] http://www.regulations.gov/#!developers.
[142] http://www.regulations.gov/#!developers.
[143] http://sunlightfoundation.com/press/releases/2013/01/31/sunlight-foundation-debuts-docket-wrench/.
[144] Michael Herz, "Using Social Media in Rulemaking: Possibilities and Barriers." http://www.acus.gov/sites/default/files/documents/Herz%20Social%20Media%20Final%20Report.pdf.
[145] http://www.whitehouse.gov/the_press_office/TransparencyandOpenGovernment.
[146] Herz, "Using Social Media in Rulemaking: Possibilities and Barriers."

collecting stakeholder information or facilitating deliberative engagement in the regulatory process.

One of the most sophisticated applications of social media to regulatory decision making is Regulation Room. Regulation Room is a project based at Cornell Law School that applies human effort and Web 2.0 technology to enhance the quantity and quality of stakeholder participation in the regulatory process.[147] Prior to the publication of a notice of proposed rulemaking, Regulation Room advertises—via both traditional media and social media—to individuals and organizations that are likely stakeholders.[148] On its own website, Regulation Room translates the often highly specialized texts of notices of proposed rulemaking into language that is accessible to broader audiences. Regulation Room also initiates and moderates online discussions about notices of proposed rulemaking. At the conclusion of these discussion periods, Regulation Room compiles the core elements into a single document that is submitted to the issuing agency as a public comment. Through this approach, Regulation Room aims to increase the types of stakeholders who participate in the notice and comment process, as well as facilitate deliberative engagement among stakeholders. Although Regulation Room makes innovative use of various Web 2.0 technologies, the human effort required to implement the project is substantial. As a result, the Regulation Room protocol has thus far been applied to a total of six regulatory actions.[149] In general, despite the transformational prospects of ICTs, the notice and comment process has thus far remained fundamentally unaltered two decades into the age of electronic rulemaking.

Implementation and Enforcement

As a general matter, the agency that issues a regulation is responsible for implementation and enforcement. Agencies have dedicated enforcement offices responsible for ensuring that regulated entities comply with regulatory actions. For example, the EPA utilizes civil administrative actions to notify regulated entities about violations. If such noncompliance continues, the agency pursues, in cooperation with the Department of Justice, civil judicial actions or criminal actions that can result in fines or imprisonment.[150]

Regulatory enforcement often entails cooperation between federal agencies and state governments. For example, the EPA establishes ambient air quality standards (NAAQS) at the national level.[151] States must develop State Implementation Plans (SIPs) that identify control measures and strategies for bringing and keeping their jurisdictions in compliance with NAAQS.

[147] http://regulationroom.org/.
[148] Jackeline Solivan and Cynthia R. Farina, "Regulation Room: How the Internet Improves Public Participation in Rulemaking." http://scholarship.law.cornell.edu/cgi/viewcontent.cgi?article=1012&context=ceri.
[149] http://regulationroom.org/.
[150] http://www2.epa.gov/enforcement/enforcement-basic-information.
[151] http://www.epa.gov/oar/urbanair/sipstatus/overview.html.

SIPs are developed through transparent processes that include the opportunity for public commenting, and are ultimately subject to EPA approval.

Almost all major environmental statutes include provisions allowing private citizens to sue violators of regulatory standards in federal court.[152] Such provisions permit "private suits against private parties that violate federal law, as well as against the EPA Administrator for failing to perform her statutorily mandated duties."[153] Such litigation must be announced sixty days in advance and cannot proceed if the EPA has already begun pursuing an enforcement action against the target of the lawsuit.[154]

Retrospective Review of Agency Regulations

A number of statutes and executive orders have established requirements for reviewing regulations after promulgation and implementation. The RFA requires agencies to review rules with significant economic impacts on small entities every ten years.[155] Presidents since at least Jimmy Carter have directed agencies to assess the extent to which regulations continue to achieve policy goals in a manner consistent with analytical principles and presidential priorities. For example, Executive Order 12866 requires each agency to "periodically review its existing significant regulations to determine whether any such regulations should be modified or eliminated so as to make the agency's regulatory program more effective in achieving the regulatory objectives, less burdensome, or in greater alignment with the President's priorities."[156] Further, as noted earlier, the PRA requires agencies to solicit public comment on the reporting burdens associated with regulation every three years.

Despite such requirements, agencies have devoted little attention to evaluating the impacts of existing regulations.[157] Recognizing the importance of this task, OIRA, in its annual reports to Congress on the benefits and costs of regulation, has solicited public input on existing regulations, and, in 2002, received approximately 1,700 responses identifying a total of 316

[152] See Air Pollution Prevention and Control (Clean Air) Act, 42 U.S.C. § 7604(a) (1994); Federal Water Pollution Control (Clean Water) Act, 33 U.S.C. § 1365(a) (1994); Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. §9659(a) (1994); Emergency Planning and Community Right to Know Act (EPCRA) 42 U.S.C. §11046(a)(1) (1994); Resource Conservation and Recovery Act (RCRA) 42 U.S.C. § 6972 (1994); Safe Drinking Water Act, 42 U.S.C. § 300j-8 (1994 & Supp. IV 1998); Toxic Substances Control Act, 15 U.S.C. § 2619 (1994). The one major environmental statute without a citizen-suit provision is the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 U.S.C. § 136 et seq. (1994).

[153] Jonathan H. Adler. "Stand or Deliver: Citizen Suits, Standing, and Environmental Protection," *Duke Environmental Law & Policy Forum*, Vol. 12 (Fall 2001), p.46.

[154] Adler, "Stand or Deliver: Citizen Suits, Standing, and Environmental Protection," p. 47.

[155] http://www.archives.gov/federal-register/laws/regulatory-flexibility/602.html.

[156] http://www.archives.gov/federal-register/executive-orders/pdf/12866.pdf.

[157] Susan E. Dudley and Kathryn Newcomer, forthcoming working paper.

distinct reform nominations.[158] OIRA worked with agencies to revise approximately one hundred regulations under this public nomination process.[159]

In 2011, President Obama called upon agencies to "consider how best to promote retrospective analysis of rules that may be outmoded, ineffective, insufficient, or excessively burdensome, and to modify, streamline, expand, or repeal them in accordance with what has been learned."[160] In response to this executive order, agencies made their draft plans for retrospective review available for public comment in 2011, and have continued to maintain an open docket, webpage, and/or email address to provide a continuing opportunity for the public to comment on regulations that would benefit from retrospective review.[161] President Obama reinforced this requirement two years later, emphasizing the importance of public participation in retrospective review of agency regulations: "agencies shall invite, on a regular basis (to be determined by the agency head in consultation with the Office of Information and Regulatory Affairs (OIRA)), public suggestions about regulations in need of retrospective review and about appropriate modifications to such regulations."[162]

Initial assessments of the Obama administration's effort at promoting retrospective evaluation of regulations suggest that agencies' "retrospective reviews mostly reflect business-as-usual management, with little discernible new work on the retrospective analysis and measurement called for in the executive order."[163] Retrospective review, including both analysis and stakeholder participation, is far less robust than established practices for the initial development of regulations.[164] As one researcher has observed, "retrospective review is today where prospective analysis was in the 1970s: ad hoc and largely unmanaged."[165] ACUS is considering recommendations to institutionalize retrospective review of regulations, including the

[158] United States Office of Management and Budget, "Informing Regulatory Decisions: 2003 Report to Congress on the Costs and Benefits of Federal Regulations and Unfunded Mandates on State, Local and Tribal Entities," September 2003. http://www.whitehouse.gov/sites/default/files/omb/assets/omb/inforeg/2003_cost-ben_final_rpt.pdf.

[159] John D. Graham, Paul R. Noe, and Elizabeth L. Branch, "Managing the Regulatory State: The Experience of the Bush Administration," *Fordham Urban Law Journal,* Vol. 33, No. 4 (2005), pp. 101-148.

[160] http://www.gpo.gov/fdsys/pkg/FR-2011-01-21/pdf/2011-1385.pdf.

[161] Administrative Conference of the United States ongoing project on retrospective review. http://www.acus.gov/research-projects/retrospective-review-agency-rules.

[162] http://www.gpo.gov/fdsys/pkg/FR-2012-05-14/pdf/2012-11798.pdf.

[163] Randall Lutter, "The Role of Retrospective Analysis and Review in Regulatory Policy," Mercatus Center at George Mason University, April 2012. http://mercatus.org/sites/default/files/publication/Role-Retrospective-Analysis-Review-Regulatory-Policy-Lutter.pdf.

[164] Susan Dudley, "A Retrospective Review of Retrospective Review," George Washington University Regulatory Studies Center, May 07, 2013. http://regulatorystudies.columbian.gwu.edu/sites/regulatorystudies.columbian.gwu.edu/files/downloads/20130507-a-retrospective-review-of-retrospective-review.pdf.

[165] Cary Coglianese, "Moving Forward with Regulatory Lookback," *Yale Journal on Regulation*, Vol. 30 (2013), p. 59.

development of criteria and guidelines for retrospective review and an emphasis on the role for regulatory coordination, including internationally, and public participation.[166]

Conclusions: Stakeholder Participation Now and in the Years Ahead

Contemporary democracies place great value on transparent, evidence-based regulatory policymaking that results in outcomes addressing the concerns of society broadly construed, as opposed to catering to specialized interests. The OECD finds that "formalised consultation processes are an important feature of regulatory transparency," observing that "participation of stakeholders in the regulatory process ensures that feedback about the design and effects of regulation is taken into account when preparing new regulation. It increases the likelihood of compliance by building legitimacy in regulatory proposals and may therefore improve the effect of regulation and reduce the cost of enforcement."[167]

In many respects, the process of developing regulations in the United States is a model of transparency, as it institutionalizes a wide array of opportunities for stakeholder participation. All regulatory actions are taken under authority initially delegated to executive branch agencies by legislatively-enacted statutes. The content of regulations is constrained by the language of authorizing statutes, executive principles for regulatory analysis, and procedural rules regarding the consideration of public comments. Agencies must, as a general matter, solicit public comment on proposed regulations and base final rules on the administrative record, including comments that have been submitted. During the notice and comment process, both the proposed rule and extensive justifications for alternative courses of action are available to the public, and any interested party may submit a comment. Once rules are finalized, issuing agencies are responsible for enforcement and facilitating retrospective reviews of the effects of regulations.

Despite nearly seven decades of institutionalized stakeholder participation through the notice and comment process and other instruments, challenges and opportunities remain for regulatory policymaking in the United States. It has been argued, for example, that "by the time the NPRM is issued, the agency has made a very substantial commitment to the draft rule it is proposing, and will be understandably reluctant to modify it very substantially afterwards."[168] Furthermore, public comment is largely oriented toward the provision of information and, as a result, does not do as much as it could to maximize deliberative engagement in the regulatory process. As highlighted earlier, stakeholders have relatively short windows between publication of notices of

[166] Final recommendations are expected to be approved by ACUS in December 2014. A draft consultant report and recommendations are available at http://www.acus.gov/research-projects/retrospective-review-agency-rules.

[167] OECD, "Indicators of Regulatory Management Systems," Regulatory Policy Committee, 2009 Report. http://www.oecd.org/gov/regulatory-policy/44294427.pdf

[168] Richard Parker and Alberto Alemanno, "Towards Effective Regulatory Cooperation under TTIP: A Comparative Overview of the EU and US Legislative and Regulatory Systems," May 2014, p. 47. http://trade.ec.europa.eu/doclib/docs/2014/may/tradoc_152466.pdf.

proposed rulemaking and deadlines for filing comments, and therefore the majority of comments are submitted on or close to the last days of comment periods. In such an environment with limited opportunity for reflection on positions held by others, stakeholders often craft comments with an eye toward future litigation if the final rule is inconsistent with their preferences.[169] Such public comments serve as legal documents rather than as instruments for fostering deliberative engagement among stakeholders with varying perspectives. In the end, such legal documents are often of limited utility to agency officials seeking to finalize regulatory decisions.[170]

ICTs, despite limitations thus far in their impact on regulatory policymaking, offer the potential to harness the wisdom of dispersed knowledge and facilitate stakeholder participation that is deliberative in orientation. Agencies and stakeholders might utilize open source workflows in the regulatory process.[171] Open source software, such as Git,[172] provides a platform, not unlike a collaborative wiki, for individuals to build upon one another's contributions, by adding, editing, updating, and correcting information and interpretations.[173] Such engagement would operate not as a replacement, but as a supplement to the notice and comment process, especially early in the development of regulations before agency and stakeholder positions have hardened.

Another area of the regulatory process where there is strong potential for enhancing stakeholder participation, both in terms of information provision and deliberative engagement, is retrospective review of rules after they have been promulgated and implemented. As discussed earlier, President Obama has reinforced long-standing executive requirements for retrospective regulatory review and has emphasized the role of the public in exchanging information on the impacts of agency rules. Such ambitions have not yet been fully realized, an indication that stakeholder participation in retrospective review may not enhance the reduction of existing "unjustified regulatory burdens and cost."[174] Retrospective review, and in particular stakeholder participation in this process, may, however, contribute to the design and implementation of future regulations that meet the needs of transparency and evidence-based policymaking espoused by democracies in the 21st century.

[169] Susan Dudley and George Gray, "Improving the Use of Science to Inform Environmental Regulation," in *Institutions and Incentives in Regulatory Science*, Jason Scott Johnston, ed. (Lanham, MD: Lexington Books, 2012).
[170] E. Donald Elliott, "Re-Inventing Rulemaking." *Duke Law Journal*, Vol. 41, No. 6 (1992), pp. 1490-1496.
[171] Ben Balter, "Open Government Is So '08, or Why Collaborative Government Is the Next Best Thing." http://ben.balter.com/2014/06/02/beyond-open-government/.
[172] http://git-scm.com/.
[173] Dudley and Gray, "Improving the Use of Science to Inform Environmental Regulation."
[174] Executive Order 13610. http://www.whitehouse.gov/sites/default/files/docs/microsites/omb/eo_13610_identifying_and_reducing_regulatory_burdens.pdf.

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Stakeholder Participation and Regulatory Policymaking in the United States

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