Public Pressure Campaigns and Bureaucratic Policymaking

By

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Contents

Introduction

Does civic engagement through public pressure campaigns affect agency rulemaking? I examine who participates in public pressure campaigns and why, whether they affect congressional oversight, and whether they affect policy. Answering these questions informs our understanding of bureaucratic politics and interest group lobbying, organizing, and mobilizing tactics. If ordinary people have a voice in bureaucratic policymaking, I argue, it is through public pressure campaings. Thus, understnding the nature and effects of these campaigns is key to understanding modern democracy.

With the rise of the administrative state, U.S. federal agencies have become a major site of policymaking and political conflict. By some estimates, upward of 90% of legally binding U.S. federal policy is now written by agencies. Agency rules are revised much more frequently than statutory law (Wagner et al., 2017). In the years or decades between legislative enactments, federal agencies make legally-binding rules interpreting and reinterpreting old statutes to address emerging issues and priorities. Examples are striking: Many effects of the Dodd-Frank Wall Street Reform and Consumer Protection Act were largely unknown until the specific regulations were written, and it continues to change as these rules are revised. Congress authorizes billions in grants, subsidies, and leases for public lands, but who gets them depends on agency policy. In the decades since the last major environmental legislation, agencies have written thousands of pages of new environmental regulations and thousands more changing tack under each new administration. These revisions significantly shape lives and fortunes. For example, in 2006, citing the authority of statutes last amended in the 1950s, the Justice Department's Bureau of Prisons proposed a rule restricting eligibility for parole. In 2016, the Bureau withdrew this rule and announced it would require fewer contracts with prison companies, precipitating a 50% loss of industry stock value. Six months later, a new administration announced these policies would again be reversed, leading to a 130% increase in industry stock value. Agency rulemaking matters.

Less clear, however, is how the new centrality of agency rulemaking fits with democracy. In addition to the bureaucracy's complex relationships with the president and Congress, agencies have complex and poorly understood relationships with the public and advocacy groups. Relationships with constituent groups may even provide

agencies with a degree of "autonomy" from their official principals (Carpenter, 2001).

Participatory processes like public comment periods, where government agencies must solicit public input on draft policies, are said to provide political oversight opportunities (Balla, 1998; Mccubbins and Schwartz, 1984), democratic legitimacy (Croley, 2003; Rosenbloom, 2003), and new technical information (Yackee, 2006; Nelson and Yackee, 2012). While recent scholarship on agency policymaking has shed light on the sophisticated lobbying by businesses and political insiders, we know surprisingly little about the vast majority of public comments which are submitted by ordinary people as part of public pressure campaigns.[1] Activists frequently target agency policymaking with letter-writing campaigns, petitions, protests, and mobilizing people to attend hearings, all classic examples of "civic engagement" (Verba and Nie, 1987). Yet civic engagement remains poorly understood in the context of bureaucratic policymaking.

These occasional bursts of civic engagement in bureaucratic policymaking raise practical and theoretical questions for the practice of democracy.[2] These questions, in turn, hinge on unanswered empirical questions: Do these campaigns affect policy? If so, by what mechanisms? Existing research finds that commenters believe their comments matter (Yackee, 2015) and that the number of public comments varies across agencies and policy processes (Judge-Lord, 2019a; Libgober, 2018; Moore, 2017), but the relationship between the scale of public engagement and policy change remains untested.

Motivation

Leading models of influence in bureaucratic policymaking focus on two key political forces: sophisticated interest group lobbying and political oversight. As bureaucrats learn about policy problems and balance interest-group demands, public comment processes allow lobbying organizations to provide useful technical information and inform decisionmakers of their preferences on draft policies. Agencies may then update policy positions within constraints imposed by their political principals.

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[1]As I show elsewhere (Judge-Lord, 2019a), most comments submitted to regulations.gov are form comments, more akin to petition signatures than sophisticated lobbying. Indeed, approximately 40 million out of 50 million (80%) of these public comments mobilized by just 100 advocacy organizations.

[2]In 2018, the Administrative Conference of the United States (ACUS) identified mass commenting as a top issue in administrative law. In their report to ACUS, Sant'Ambrogio and Staszewski (2018) conclude, "The 'mass comments' occasionally submitted in great volume in highly salient rulemakings are one of the more vexing challenges facing agencies in recent years. Mass comments are typically the result of orchestrated campaigns by advocacy groups to persuade members or other like-minded individuals to express support for or opposition to an agency's proposed rule." Mass comment campaigns are known to drive significant participation of ordinary people in Environmental Protection Agency rulemaking (Judge-Lord, 2019a; Potter, 2017; Balla et al., 2018). Cuéllar (2005), who examines public input on three rules, finds that ordinary people made up the majority of commenters demonstrating "demand among the mass public for a seat at the table in the regulatory process."

While this may describe most cases of bureaucratic policymaking, these models do not explain or account for the contentious politics that occasionally inspire millions of ordinary people to respond to calls for public input on draft agency policies. Mass engagement in bureaucratic policymaking has thus largely been ignored by political scientists, leaving a weak empirical base for normative and prescriptive work. Like other forms of mass political participation, such as protests and letter writing campaigns, mass public comments on draft agency rules provide no new technical information. Nor do they wield any formal authority to reward or sanction bureaucrats, as comments from a Members of Congress might. The number on each side, be it ten or ten million, has no legal import for an agency's response.

How, if at all, should scholars incorporate mass engagement into models of bureaucratic policymaking?

Outline of the book

This dissertation explores the effects of public pressure campaigns on agency rulemaking, a technocratic policy process where "public participation" is usually limited to sophisticated lobbying but occasionally includes millions of people mobilized by public pressure campaigns. Public comment periods on proposed policies purport to provide democratic accountability. Yet theories of bureaucratic policymaking largely ignore the occasional bursts of civic engagement that generate the vast majority of public comments on proposed rules. To fill this gap, I build and test theories about the role of public pressure in policymaking. I collect and analyze millions of public comments to develop the first systematic measures of civic engagement and influence in bureaucratic policymaking.

Chapter 1 "Agency Rulemaking in American Politics" situates agency rulemaking in the context of American politics. Tracing broad trends over the past 40 years, I show that rulemaking has become a major site of policymaking and political conflict.

Chapter 2 "Why Do Agencies (Sometimes) Get So Much Mail?" addresses who participates in public pressure campaigns and why. Are public pressure campaigns, like other lobbying tactics, primarily used by well-resourced groups to create an "astroturf" impression of public support? Or are they better understood as conflict expansion tactics used by less-resourced "grassroots" groups? I find that mass comment campaigns are almost always a conflict expansion tactic. Furthermore, I find no evidence of negativity bias in public comments. Indeed, from 2005 to 2017, most comments supported proposed rules. This is because public comments tend to support Democratic policies and oppose Republican policies, reflecting the asymmetry in mobilizing groups.

Chapter 3 "Do Public Pressure Campaigns Influence Congressional Oversight?" examines the effect of public pressure campaigns on whether legislators are more likely to engage in rulemaking. This involves collecting and coding thou-

sands of comments from Members of Congress on proposed rules with and without public pressure campaigns. These data also allow me to assess congressional oversight as a mediator in policy influence, i.e., the extent to which public pressure campaigns affect policy indirectly through their effects on legislators' oversight behaviors.

Chapter 4 "Do Public Pressure Campaigns Influence Policy?" leverages a mix of hand-coding and computational text analysis methods to assess whether public pressure campaigns increase lobbying success. To measure lobbying success, I develop computational methods to identify lobbying coalitions and estimate their effect on each rule posted for comment on regulations.gov. I then validate these methods against a random sample of 100 rules with a mass-comment campaign and 100 rules without a mass-comment campaign, hand-coded for whether each coalition got the policy outcome they sought. Finally, I assess potential mechanisms by which mass public engagement may affect policy.

Chapter 5 "The Environmental Justice Movement and Technocratic Policymaking" examines the discursive effects of environmental justice claims both qualitatively and quantitatively. I write about the role of Native activists and environmental groups in shaping federal environmental regulations. Looking across over 20,000 draft regulations that failed to address environmental justice issues, I find that agencies are more likely to add language addressing environmental justice in their final rules when public comments raise environmental justice concerns.

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Agency Rulemaking in American Politics

See the working paper version of this chapter *here*

Abstract

Large democracies face two big problems. First, they are vulnerable to fleeting passions and demagogues. To combat this, many decisions are left to experts who, ideally, exercise judgment loosely guided by the public. Second, everyone cannot vote on every decision. We thus delegate power to representatives (who then delegate it to deputies), create temporary mini-publics, and solicit input from those most affected or moved by a public decision.[1] Most policy is then made by bureaucrats, supposedly guided indirectly through elected representatives and directly by limited public input (mostly limited to more contentious policy debates).

Both of these problems converge in the bureaucracy, run by experts who are deputized by elected officials (or by their deputy's deputy's deputy) and with procedures that create opportunities for public input. It is far from clear how bureaucratic decisions are to balance expertise, accountability to elected officials, and responsiveness to public input in decisionmaking.

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[1]As imagined by Dahl (1989), mini-publics are representative, selected at random, and deliberative. Besides juries, however, randomly selected deliberative bodies are rare. Instead, citizens more often engage in government decisions when given opportunities to opt-in, such as hearings, petitions, and public comment periods. These mechanisms of engagement generate a different, more contentious flavor of public input than the discourse imagined by scholars who focus on deliberation.

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Public Pressure: Why Do Agencies (sometimes) Get So Much Mail?

Abstract

I examine who participates in public pressure campaigns and why. Scholars of bureaucratic policymaking have focused on the sophisticated lobbying efforts of powerful interest groups. Yet agencies occasionally receive thousands or even millions of comments from ordinary people. How, if at all, should scholars incorporate mass participation into models of bureaucratic policymaking? Are public pressure campaigns, like other lobbying tactics, primarily used by well-resourced groups to create an impression of public support? Or are they better understood as conflict expansion tactics used by less-resourced groups? To answer these questions, I collect and analyze millions of public comments on draft agency rules. Using text analysis methods underlying plagiarism detection, I match individual public comments to pressure-group campaigns. I find that most public comments are mobilized by a few public interest organizations. Over 80% of the 48 million comments on proposed rules posted to regulations.gov were mobilized by just 100 organizations, 87 of which lobby in coalitions with each other. Contrary to other forms of lobbying, I find that mass comment campaigns are almost always a conflict expansion tactic, rather than well-resourced groups creating an impression of public support. Contrary to other forms of political participation, I find no evidence of negativity bias in public comments. Indeed, from 2005 to 2017, most comments supported proposed rules. This is because public comments tend to support Democratic policies and oppose Republican policies, reflecting the asymmetry in mobilizing groups.

See the working paper version of this chapter *here*

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Oversight: Do Public Pressure Campaigns Influence Congressional Oversight?

Abstract

This chapter examines the effect of public pressure campaigns on congressional oversight. I assess whether legislators are more likely to engage in rulemaking when advocacy groups mobilize public pressure. This involves collecting and coding thousands of comments from Members of Congress on proposed rules with and without public pressure campaigns. These data also allow me to assess congressional oversight as a mediator in policy influence, i.e., the extent to which public pressure campaigns affect agency decisionmakers directly or indirectly through their effects on elected officials' oversight behaviors.

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Policy Influence: Do Public Pressure Campaigns Influence Bureaucratic Policymaking?

Abstract

I assess whether public pressure campaigns increase lobbying success in agency rule-making using a mix of hand-coding and computational text analysis methods. To measure lobbying success, I develop computational methods to identify lobbying coalitions and estimate lobbying success for all rules posted for comment on regulations.gov. These methods are validated against a random sample of 100 rules with a mass-comment campaign and 100 rules without a mass comment campaign that I hand-code for whether each coalition got the policy outcome they sought. I then assess potential mechanisms by which mass public engagement may affect policy. Each mechanism involves a distinct type of information revealed to decisionmakers. Of primary interest is the extent to which public pressure campaigns affect agency decisionmakers directly or indirectly through their effects on elected officials' oversight behaviors. I test this by assessing congressional oversight as a causal mediator using a subset of rules where I collect and code correspondence from Member of Congress to agencies about proposed agency rules.

See the preanalysis plan for this chapter *here*

I assess the relationship between the number of public comments and the amount of change between draft and final policy texts. Next, I assess the relationship between the number of people mobilized by each campaign and whether the campaign achieved its policy goals. Finally, I theorize and test four mechanisms by which public input may affect bureaucratic policymaking. Each mechanism involves a distinct type of information that pressure campaigns may relay to policymakers: technical information, information about the likelihood of political consequences, information about the preferences of elected officials, or information about the preferences of the attentive public. Because scholarship on bureaucratic policymaking has focused on the power of technical information, where insider lobbying is most likely to matter and where outside strategies are least likely to matter, political scientists have largely overlooked mass mobilization as a tactic.

I find evidence consistent with the observable implications of mass comment campaigns influencing policymaking through

$$non-nullresults$$

but no evidence that mass engagement affects rulemaking processes or outcomes through

$$nullresults$$

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4.1 Data

I create an original dataset that combines several sources of data on U.S. federal agency rulemaking. The core data are the texts of draft and final rules and public comments on these proposed rules. This includes all 16 thousand proposed rules from 144 agencies (as defined by regulations.gov) that were open for comment on regulations.gov between 2005 and 2018, that received at least one comment from an organization, and that saw a final agency action between 2005 and 2019. There are over 50 million comments on this set of rules. I scrape draft and final rule texts from federalregister.gov and comments submitted as attachments or by mail from regulations.gov. I retrieve comments submitted directly on regulations.gov and metadata on rules and comments (such as the dates that the proposed rule was open for comment and whether the agency identified the organization submitting the comment) from the regulations.gov API. I add additional metadata on rules (such as whether the rule was considered "significant") from the Unified Agenda published by the Office of Information and Regulatory Affairs (reginfo.gov).

Finally, to better capture positions expressed by Members of Congress on proposed rules, I supplement congressional comments posted on regulations.gov with Freedom of Information Act Requests for all communication from Members of Congress to each agency on proposed rules from 2007 to 2019.[1]

The combined dataset has over 50 million observations of one public or legislator comment on a proposed rule. I attempt to identify the organization(s) that submitted or mobilized each comment by extracting all organization names from the comment text. For comments that do not reference an organization, I am often able to identify organizations with an internet search using the comment's text. I then identify lobbying coalitions by clustering comments that use similar phrases or word frequencies. Co-signed comments are always assigned to the same coalition. Likewise, form-letter comments are always assigned to the same coalition.[2]

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[1]Many agencies provided records of their congressional correspondence going back to 2005 or earlier.

[2]The same comment text is attributed to each signatory of a comment. For more on how I identify organizations and coalitions, see Chapter 2, "Why Do Agencies (Sometimes) Get So Much Mail?".

Because my hypotheses are about the influence of organizations and coalitions, for analysis, I collapse these data to one observation per organization or coalition per proposed rule and identify the main substantive comment submitted by each organization's staff or lawyers, which are usually much longer than supporting comments like form letters. For hand-coding, I first select a random sample of 100 proposed rules with a mass-comment campaign and then selecting a matched sample of 100 proposed rules without a mass comment campaign. Matching prioritizes, presidential administration, policy area (following Policy Agendas Project coding), rule significance, department, agency, subagency, and proposed rule length, respectively.[3] This hand-coded sample is several times larger than leading studies using hand-coding and includes rules with very large and small numbers of comments that previous studies exclude. The full sample is four hundred times larger.[4]

4.2 Methods

The most direct way to assess the hypothesis that mass engagement increases lobbying success is to assess the magnitude of the relationship between the number of comments that a coalition mobilizes and its lobbying success. However, public pressure campaigns may only be effective under certain conditions. Thus, I first assess the main relationship and then assess evidence for or against different potential causal pathways of influence.

4.2.1 The Dependent Variable: Lobbying Success

The dependent variable is the extent to which a lobbying coalition got the policy outcome they sought, which I measure in three ways.

First, on a sample of rules, I hand-code lobbying success for each lobbying coalition, comparing the change between the draft and final rule to each organization's demands on a five-point scale from "mostly as requested" to "significantly different/opposite than requested." To do this, I first identify organizational comments. For each organization, I identify the main overall demand and the top three specific demands and the corresponding parts of the draft and final rule texts.[5]
I then code overall lobbying success and lobbying success on each specific demand for each organization and coalition. Both the overall score and average score across specific demands both fall on the interval from -1 ("significantly different") to 1 ("mostly as requested").

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[3]For more on policy area coding, see "Trends in U.S. Executive-branch Policymaking 1980-2016" in Chapter 1.

[4]Except for comment texts and attachments, these data are available separately and combined on github.com/judgelord/rulemaking.

[5]This does not capture rule changes on which an organization did not comment. The codebook is available here. See examples of coded cases here.

Second, I use methods similar to automated plagiarism detection algorithms to identify changes between a draft and final rule that were suggested in a comment. Specifically, I count the number of words in phrases of at least ten words that appear in the comment and final rule, but not the draft rule. To do this, I first identify new or changed text in the final rule by removing all 10-word or longer phrases retained from the draft rule. I then search each comment for any 10-word or longer phrases shared with the new rule text and count the total number of shared words in these shared phrases. Finally, I normalize this count of "copied" words across shorter and longer comments by dividing it by the total number of words in the comment. This measure falls between 0 (zero percent of words from the comment added to the final rule) and 1 (100 percent of words from the comment added to the final rule). As a robustness check, I also use the non-normalized version of this variable, i.e. the raw number of "copied" words.

Third, I capture a broader dimension of lobbying success by modeling the similarity in word frequency distributions between comments and changes to the rule. New or changed text is identified as described above, except that I also include the rule's preamble and the agency's responses to comments. Agencies write lengthy justifications of their decisions in response to some comments but not others. By including preambles and responses to comments, this measure captures attention to a comment's demands and the extent to which the agency adopts a comment's discursive framing (i.e. the distribution of words it uses). I us cosign similarity to scale the word frequencies used by each comment relative to those in changes between draft and final rule.[6] This measure falls between 0 (no common words) and 1 (exactly the same distribution of words).

To assess the performance of these automated methods (text-reuse and word-frequency similarity), I calculate the correlation between these scores and my hand-coded 5-point scale for rules in the hand-coded sample where a final rule was published. As the automated methods apply at the organization-level, coalition scores are those from the lead organization–by default, the organization(s) with the longest comment. At the coalition level, the correlation between hand-coded influence is ___ with the text-reuse method and ___ with the word-frequency method.

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[6]For the subset of rules with five or more organizational comments, I create a more sophisticated measure of word frequency similarity by averaging the absolute value of differences in topic proportions θ between the comment and new rule text across 45 LDA models of all organizational comments estimated with 5 through 50 topics, normalized by the number of topics k_n and the number of models such that y_i falls between 0 (completely different estimated topic proportions) and 1 (exactly the same topic proportions), $y_i = \sum_5^{n=50} (\frac{\sum |\theta_{rule\ change_i|k=n} - \theta_{comment_i|k=n}|}{n}) * \frac{1}{45}$. For more on these methods of measuring textual similarity, see "Measuring Change and Influence in Budget Texts".

4.2.2 The Main Predictor Variable

The number of supportive comments generated by a public pressure campaign (the main variable of interest) is a tally of all comments mobilized by each organization or coalition that ran a mass-comment campaign on a proposed rule. Because the marginal impact of additional comments likely diminishes, the number of comments is logged. This does not include the main substantive comments submitted by an organization's staff or lawyers. Nor does it include comments that are not affiliated with the organization or coalition. If an organization mobilizes more than 1000 comments or 100 identical comments on a proposed rule, I code that organization, its coalition, and the proposed rule as having a mass comment campaign. Where organizational comments are not supported by a mass comment campaign *log mass comments* takes a value of 0.

4.2.3 Explanatory variables

Other predictors of lobbying success in the models below are the length of the (lead) organization's comment, whether the coalition lobbies unopposed, the size of the lobbying coalition, and whether the coalition is business-led. *Comment length* is normalized by dividing the number of words in the comment by the number of words in the proposed rule, thus capturing the complexity of the comment relative to the complexity of the proposed rule. The number and type(s) of organization(s) is an attribute of each coalition (e.g. a *business-led* coalition with *N* organizational members). Coalition *size* is the number of distinct commenting organizations in the coalition (including those that co-sign a comment). For organizations lobbying alone, coalition *size* is 1. A coalition is *unopposed* when no opposing organizations comments. I code a coalition as *business-led* if the majority of commenting organizations are for-profit businesses, or if upon investigation, I find it to be primarily led or sponsored by for-profit businesses.[7]

4.2.4 Limitations

The two main limitations of this design both bias estimates of public pressure campaign influence toward zero.

First, lobbying success may take forms other than changes in policy texts. Agencies may speed up or delay finalizing a rule, extend the comment period, or delay the date at which the rule goes into effect. Indeed, commentors often request speedy or delayed rule finalization, comment period extensions, or delayed effective dates. I capture these potential outcomes in my hand-coding but not in the two automated methods, which apply only to observations with a final rule text. Likewise, there there is no change between draft and final rule, both automated methods necessarily

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[7]For more on how I identify types of organizations and coalitions, see Chapter 2, "Why Do Agencies (Sometimes) Get So Much Mail?".

record lobbying success as 0, even if a comment asks an agency to publish a rule without change.[8]

Second, bureaucrats may anticipate public pressure campaigns when writing draft rules, muting the observed relationship between public pressure and rule change at the final rule stage of the policy process.

4.3 Modeling the direct relationship

For all three measures of lobbying success, I assess the relationship between lobbying success and mass comments by modeling coalition i's lobbying success, y_i as a combination of the relative length of the (lead) organizations comment, whether the coalition is unopposed, the coalition's size, whether it is a business coalition, and the logged number of mass comments. I estimate OLS[9] regression:

$$y_i = \beta_0 + \beta_1 log(comments_i) + \beta_2 length_i + \beta_3 unopposed_i + \beta_4 size_i + \beta_5 business_i + \epsilon_i$$

4.3.1 Modeling mediated relationships

To estimate mediated effects, I estimate the average conditional marginal effect (ACME) and the proportion of the total effect attributed to mediation through congressional support (comments or other communication from Members of Congress supporting the coalition's position on the proposed rule). As developed by Imai et al. (2010), this involves first estimating a model of the proposed mediator as a combination of covariates, X (*length*, *unopposed*, *size*, and *business*) and then the outcome as a combination of the mediator, *congressional support*, and covariates, X.

Mediator model:

$$congressional\ support_i = \beta_0 + \beta_1 log(comments_i) + \beta_{2-n}X_i + \epsilon_i$$

Outcome model:

$$y_i = \beta_0 + \beta_1 log(comments_i) + \beta_2 congressional\ support_i + \beta_{3-n}X_i + \epsilon_i$$

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[8]Time allowing, I will hand-code a larger sample of proposed rules where no final rule was published so that these cases can be included in the analysis. Likewise, I will identify cases where organizations requested rules to be published as-is and recode these cases by hand.

[9]See OLS model estimates with simulated data. I also estimate hand-coded lobbying success with beta regression and ordered logit, which are more appropriate but less interpretable. For the automated measures of lobbying success, I estimate beta regression models with the same variables.

4.4   Examples of hand-coded lobbying success

2015 Waters of the United States Rule: In response to litigation over which waters were protected by the Clean Water Act, the Environmental Protection Agency and Army Corp of Engineers proposed a rule based on a legal theory articulated by Justice Kennedy, which was more expansive than Justice Scalia's. The Natural Resources Defense Council submitted a 69-page highly technical comment "on behalf of the Natural Resources Defense Council…, the Sierra Club, the Conservation Law Foundation, the League of Conservation Voters, Clean Water Action, and Environment America" supporting the proposed rule:

> "we strongly support EPA's and the Corps' efforts to clarify which waters are protected by the Clean Water Act. We urge the agencies to strengthen the proposal and move quickly to finalize it…"

I coded this as support for the rule change, specifically not going far enough. I also coded it as requesting speedy publication. NRDC makes four substantive requests: one about retaining language in the proposed rule ("proposed protections for tributaries and adjacent waters…must be included in the final rule") and three proposed changes ("we describe three key aspects of the rule that must be strengthened").[10] These demands provide specific keywords and phrases for which to search in the draft and final rule text.

A coalition of 15 environmental organizations mobilized over 944,000 comments, over half (518,963) were mobilized by the four above organizations: 2421,641 by Environment America, 108,076 by NRDC, 101,496 by clean water action, and 67,750 by the Sierra Club. Other coalition partners included EarthJustice (99,973 comments) and Organizing for Action (formerly president Obama's campaign organization, 69,369 comments). This is the upper tail end of the distribution. This coalition made sophisticated recommendations and mobilized a million people.

The final rule moved in the direction requested by NRDC's coalition, but to a lesser extent than requested–what I code as "some desired changs."" As NRDC et al. requested, the final rule retained the language protecting tributaries and adjacent waters and added some protections for "other waters" like prairie potholes and vernal pools, but EPA did not alter the exemptions for ditches and waste treatment systems.

Comparing the draft and final with text reuse allows us to count the number words that belong to 10-word phrases that appear in both the draft and final, those

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[10]These three aspects are: (1) "The Rule Should Categorically Protect Certain "Other Waters" including Vernal Pools, Pocosins, Sinkhole Wetlands, Rainwater Basin Wetlands, Sand Hills Wetlands, Playa Lakes, Interdunal Wetlands, Carolina and Delmarva Bays, and Other Coastal Plain Depressional Wetlands, and Prairie Potholes. Furthermore, "Other 'Isolated' Waters Substantially Affect Interstate Commerce and Should be Categorically Protected Under the Agencies' Commerce Clause Authority." (2) "The Rule Should Not Exempt Ditches Without a Scientific Basis" (3) "The Rule Should Limit the Current Exemption for Waste Treatment Systems"

that appear only in the draft, and those that appear only in the final. For the 2015 Waters Of The U.S. rule, 15 thousand words were deleted, 37 thousand words were added, and 22 thousand words were kept the same. This means that more words "changed" than remained the same, specifically 69% of words appearing in the draft or final were part were either deleted or added.

For this coalition, the dependent variable, *coalitions success* is 1, *coalition size* is 15, *business coalition* is 0, *comment length* is 69/88, 0.78, and *log mass comments* is log(943,931), 13.76.

2009 Fine Particle National Ambient Air Quality Standards: In 2008, the EPA proposed a rule expanding air quality protections. Because measuring small particles of air pollution was once difficult, measurements of large particulates were allowed as a surrogate measure for fine particles under EPA's 1977 PM10 Surrogate Policy. EPA proposed eliminating this policy, thus requiring regulated entities and state regulators to measure and enforce limits on much finer particles of air pollution.

EPA received 163 comments on the rule, 129 from businesses, business associations such as the American Petroleum Institute and The Chamber of Commerce, and state regulators that opposed the rule. Most of these were short and cited their support for the 63-page comment from the PM Group, "an ad hoc group of industry trade associations" that opposed the regulation of fine particulate matter. Six state regulators, including Oregon's, only requested delayed implication of the rule until they next revised their State Implementation Plans (SIPs) for Prevention of Significant Deterioration (PSD). EarthJustice supported the rule but opposed the idea that the cost of measuring fine particles should be a consideration. On behalf of the Sierra Club, the Clean Air Task Force, EarthJustice commented: "We support EPA's proposal to get rid of the policy but reject the line of questioning as to the benefits and costs associated with ending a policy that is illegal." The EarthJustice-led coalition also opposed delaying implementation: "EPA must immediately end any use of the Surrogate Policy – either by"grandfathered" sources or sources in states with SIP-approved PSD programs – and may not consider whether some flexibility or transition is warranted by policy considerations."

The final rule did eliminate the Surrate Policy but allowed states to delay implementation and enforcement until the next scheduled revision of their Implementation Plans. I code this as the EarthJustice coalition getting most of what they requested, but not a complete loss for the regulated coalition.

For the PM Group coalition, the dependent variable, *coalitions success* is -1, *coalition size* is 129, *business coalition* is 1, *comment length* is 63/85, 0.74, and *log mass comments* is 0.

For the State of Oregon's coalition, the dependent variable, *coalitions success* is 2, *coalition size* is 6, *business coalition* is 0, *comment length* is 5/85, 0.06, and *log mass comments* is 0.

For the EarthJustice coalition, the dependent variable, *coalitions success* is 1, *coalition size* is 3, *business coalition* is 0, *comment length* is 7/85, 0.08, and *log mass*

comments is 0.

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The Environmental Justice Movement and Technocratic Policymaking

Abstract

I explore the role of public comments in rulemaking by focusing on their role in the environmental justice movement. Environmental justice concerns focus on unequal access to healthy environments and protection from harms caused by things like pollution and climate change. The ways in which agencies consider environmental justice highlights how rulemaking has distributive consequences, how the public comment process creates a political community, and how claims raised by activists are addressed. Examining thousands of rulemaking processes at agencies known to address environmental justice concerns, I find that when public comments raise environmental justice concerns, these concerns are more likely to be addressed in the final rule. However, baseline rates of addressing environmental justice in rulemaking are so low that even as the probability that agencies will address environmental justice significantly increases when commenters raise these issues, in most rules, even those where commenters raise environmental justice concerns, there is no explicit attention to environmental justice. Furthermore, even when agencies do address environmental justice concerns, they often do not make the substantive policy changes that activists demand. While the number of comments raising environmental justice concerns is positively correlated with change in policy texts, the effect of the general level of public attention is mixed. Rules with more comments are more likely to address environmental justice when they did not address it in the draft rule, but rules with more comments are less likely to change how they addressed environmental justice if they did address it in the draft rule. These results suggest that the politics of rulemaking differs when there is more public attention. Patterns also vary across agencies, possibly due to the alignment of environmental justice aims with agency missions.

See the working paper version of this chapter *here*

5.1 Introduction

Social movements like the civil rights movement of the 1960s and environmental movement of the 1970s are understood to have played a critical role in advancing landmark statutes recognizing new rights and social values. Likewise, a lack of movement pressure is a leading explanation for the failure of policy efforts to address issues like climate change (Skocpol, 2013). Yet, we have little systematic evidence about the impact of social movements on modern policymaking. To what extent do movements shape the thousands of policies the government makes every year? I examine how social movements affect policymaking by assessing the environmental justice movement's impact on 25 thousand policy processes in 40 U.S. federal agencies from 1993 to 2020. Environmental justice concerns focus on unequal access to healthy environments and protection from harms caused by things like pollution and climate change. The environmental justice movement illustrates how activists attempt to inject ideas directly into the policymaking process. Systematic data on how policy documents address (or fail to address) environmental justice allow empirical tests of theories about when institutions will address claims raised by activists.

I focus on the environmental justice movement because it offers a broad but tractable scope for analysis and illuminates what is at stake in the politics of agency policymaking. Policies have distributive consequences. How policy documents address distributive issues highlights how policy processes construct communities of "relevant" stakeholders and "appropriate" criteria to evaluate policy consequences. Raising environmental justice concerns in policy debates is an example of how social movement organizations mobilize norms and evaluative frameworks that interact with organizational identities, mission, and reputations and, thus, impact policy decisions (Carpenter, 2001).

Tracing ideas like environmental justice (EJ) through policy processes reveals the mechanisms by which social movements succeed or fail to influence policy. If draft policies do not mention EJ concerns, but activists raise EJ concerns and policymakers then address in the final policy, this may be evidence that public pressure mattered. Likewise, when draft policies *do* address EJ, if groups comment on it and then policymakers change how the final policy addresses EJ, this may be evidence that public pressure mattered.

I assess the impact of the EJ movement qualitatively and quantitatively. Tracing the evolution of EJ analyses through several policy processes shows that the concept is hotly contested and rarely addressed by agencies in ways that activists find acceptable. Activist pressure affected how rules address EJ in some cases but failed to affect others.

Examining all rules published by 40 agencies to regulations.gov between 1993 and 2020, I find that activist mobilization affected policy discourse, even under administrations that were explicitly hostile to their cause. When public comments raise EJ concerns, these concerns are more likely to be addressed in policy documents. Specifically, the number of comments mobilized (both overall and by EJ advocates

specifically) is positively correlated with agencies adding language addressing EJ to policies where the draft policy did not mention EJ. When comments raise EJ concerns, sections of policies that do address EJ are also more likely to change. Furthermore, the correlation between EJ activist mobilization and policy changes is largest for agencies with missions focused on "environmental" and distributional policy—the kinds of policymakers we may expect to have institutional and cognitive processes primed to be most responsive to EJ concerns.

5.2 Theory

Participatory processes like public comment periods, where policymakers must solicit public input on draft policies, are said to provide democratic legitimacy (Croley, 2003; Rosenbloom, 2003), new technical information (Yackee, 2006; Nelson and Yackee, 2012), and political oversight opportunities (Balla, 1998; Mccubbins and Schwartz, 1984). While recent scholarship on agency policymaking has shed light on sophisticated lobbying by businesses, we know surprisingly little about the vast majority of public comments on proposed agency rules, which are submitted as part of public pressure campaigns.[1] Activists frequently target agency policymaking with letter-writing campaigns, petitions, protests, and mobilizing people to attend hearings, all classic examples of "civic engagement" (Verba and Nie, 1987). Yet civic engagement remains poorly understood in the context of bureaucratic policymaking. While practitioners and administrative law scholars have long pondered what to make of activists' mass comment campaigns, political scientists have had surprisingly little to say about this kind of civic participation.

5.2.1 Technical Information as the Currency of Lobbying

Dominant theories of bureaucratic policymaking focus on how agencies learn about policy problems and solutions (Kerwin and Furlong, 2011). Leading formal models are information-based models where comments matter by revealing information to the agency (Gailmard and Patty, 2017; Libgober, 2018), and empirical studies support the conclusion that information is the currency of lobbying in rulemaking (Yackee, 2012; Cook, 2017; Gordon and Rashin, 2018; Walters, 2019).

Rulemaking is an especially technocratic and legalistic form of policymaking that explicitly privileges scientific and legal facts as the appropriate basis for decisions. Procedural requirements to consider relevant information create incentives for lobbying groups to overwhelm agencies with complex technical information, making rulemak-

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[1]As shown in Judge-Lord (2019b), most comments submitted to regulations.gov are part of organized campaigns, more akin to petition signatures than "deliberative" participation or sophisticated lobbying. Indeed, approximately 40 million out of 50 million (80%) of these public comments on rulemaking dockets between 2004 and 2019 were mobilized by just 100 advocacy organizations.

ing obscure to all but the most well-informed insiders (Wagner, 2010). As Yackee (2019) notes:

> "to be influential during rulemaking, commenters may require resources and technical expertise. As Epstein, Heidt, and Farina (2014) suggest, agency rule-writers–who are often chosen because of their technical or policy-specific expertise–privilege the type of data-driven arguments and reasoning that are not common to citizen comments." (p. 10)

The result is that rulemaking is dominated by sophisticated and well-resourced interest groups capable of providing new technical or legal information. Empirical scholarship finds that economic elites and business groups dominate American politics in general (Jacobs and Skocpol, 2005; Soss et al., 2007; Hertel-Fernandez2019; Hacker, 2003; Gilens and Page, 2014) and rulemaking in particular. While some are optimistic that requirements for agencies to solicit and respond to public comments on proposed rules allow "civil society" to provide public oversight (Michaels, 2015; Metzger, 2010), most studies find that participants in rulemaking often represent elites and business interests (Seifter, 2016; Crow et al., 2015; Wagner et al., 2011; West, 2009; Yackee and Yackee, 2006; Yackee, 2006; Golden, 1998; Haeder and Yackee, 2015; Cook, 2017; Libgober and Carpenter, 2018). To the extent that scholars address public pressure campaigns, both existing theory and empirical scholarship suggest skepticism that it matters (Balla et al., 2018).

5.2.2 Political Information

While social movement organizations do engage in fights over technical reports and scientific studies, the information that activists provide is often more overtly political. Nelson and Yackee (2012) identify political information as a potentially influential result of groups expanding their lobbying coalition. While they focus on mobilizing experts, Nelson and Yackee (2012) describe a dynamic that can be extended to mobilizing public pressure:

> "strategic recruitment, we theorize, mobilizes new actors to participate in the policymaking process, bringing with them novel technical and political information. In other words, when an expanded strategy is employed, leaders activate individuals and organizations to participate in the policymaking process who, without the coordinating efforts of the leaders, would otherwise not lobby. This activation is important because it implies that coalition lobbying can generate new information and new actors—beyond simply the 'usual suspects' —relevant to policy decisionmakers."

I argue that, concerning political information, this logic extends to non-experts in at least two ways.

1. Information about a policy's disparate effects: First, while specific *data* on disparate impacts of policy may require expertise, anyone can highlight a community of concern and potential distributional effects of a policy. Just as Nelson and Yackee (2012) found regarding the mobilizing of diverse experts, mobilizing diverse communities affected by a policy may introduce new claims from new actors about how the communities that a policy may benefit or harm should be constructed. Instead of bolstering *scientific* claims, such comments focusing on a policy's disparate impacts bolster *political* claims about who counts and even *who exists* as a distinct, potentially affected group that deserves policymakers' attention. While bureaucratic policymaking in the United States is dominated by cost-benefit analysis that must abstract away from the distribution of costs and benefits, agencies have many reasons to consider the distributional effects of policy and often do. Thus comments raising distributive concerns provide potentially influential political information.

2. Public pressure as a political resource: Second, the number of supporters may matter because it indicates support among relevant communities or the broader public. Again, instead of bolstering *scientific* claims, perceived levels of public support bolster *political* claims.

Like other forms of political participation, such as protests and letter-writing campaigns, public pressure campaigns provide no new technical information. Nor do they wield any formal authority to reward or sanction bureaucrats. The number on each side, be it ten or ten million, has no legal import for an agency's response.

However, an organization's ability to expand the scope of conflict by mobilizing a large number of people can be a valuable political resource (Schattschneider, 1975). Furlong (1997) and Kerwin and Furlong (2011) identify mobilization as a tactic. The organizations they surveyed believed that forming coalitions and mobilizing large numbers of people were among the most effective lobbying tactics. While Furlong (1997) and Kerwin and Furlong (2011) focused on how organizations mobilize their members, I expand on this understanding of mobilization as a lobbying tactic to include a campaign's broader audience, more akin to the concept of an attentive public (Key, 1961) or issue public (Converse, 1964).

Regardless of the specific claims of commenters, expanding the scope of conflict by mobilizing public attention to rulemaking may shift policymakers' attention away from the technical information provided by the "usual suspects" and toward the distributive effects of policy.

5.2.3 Hypotheses

The existing literature on bureaucratic policymaking in general—and EJ advocacy in particular—presents competing intuitions about the effect of EJ activists and the broader public in rulemaking. From the above discussion political information, I distill five hypotheses —three about distributive information and two about public pressure. I posit hypotheses in the direction that these advocacy groups do affect

rulemaking while also noting equally plausible intuitions for the opposite conclusions. Because of the general skepticism and empirical work that has found that advocacy groups and public pressure campaigns have little to no effect on rulemaking, I set the empirical bar low: do EJ advocates and public pressure campaigns have *any* effect at all on policy documents.

5.2.3.1 Distributive Information Hypotheses

> *Distributive Information Hypothesis*: Policymakers are more likely to change whether or how policies address distributive justice when commenters raise distributive justice concerns.

As discussed above, agency policymakers have incentives to address distributive concerns, especially environmental justice, due to E.O. 12898 and judicial review of compliance with the Administrative Procedures Act. By raising EJ concerns, commenters draw attention to the distribution of policy impacts—who a policy may affect. Asserting definitions and categories of stakeholders and affected groups is one type of policy-relevant information.

> *Repeated Information Hypothesis*: Policymakers are more likely to change whether or how policies address concerns when more commenters raise them.

Scholarship on lobbying in rulemaking emphasizes the value of repeated information and coalition size (Nelson and Yackee, 2012). This implies that the more unique comments raise EJ concerns, the more likely the coalition will influence policy.[2]

Competing intuitions and other prior studies oppose both the *Distributive and Repeated Information Hypotheses.* Formal models and empirical scholarship on lobbying in rulemaking emphasize the importance of novel science and technical information—things unknown to agency experts (Wagner, 2010). Furthermore, scholarship finds business commenters are influential, and public interest groups are not (Yackee and Yackee, 2006; Haeder and Yackee, 2015). Furthermore, policymakers may be more likely to anticipate EJ concerns when they are more salient to interest groups. This would mean that rules where commenters raise EJ concerns may be the *least* likely to change whether or how EJ is addressed because policymakers are more likely to have already considered these issues and stated their final position in the draft rule.

> *Policy Receptivity Hypothesis*: Policymakers that more frequently address concerns like environmental justice will be more responsive to commenters raising those concerns.

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[2]I distinguish unique comments from mass comments. The number of unique comments approximates a coalition's size regarding the number of different groups, each submitting a unique text. The total number of comments, including signatures on identical form letters, measures public attention and pressure.

Bureaucracies are specialized institutions built to make and implement certain kinds of policies based on certain goals and types of facts. Each agency's distinct norms and epistemic community determine whether policymakers see issues as "environmental" and whether they have disparate impacts that demand consideration of distributive "justice." Some policymakers may see their policy area as more related to environmental justice than others and thus be more receptive to commenter concerns.

The competing intuition to the *Policy Receptivity Hypothesis* is that policymakers familiar with EJ concerns are the *least* likely to respond to EJ concerns because they anticipate these concerns—they are not novel to them. If so, agencies that rarely consider EJ may be more easily influenced by commenters who present somewhat novel information and concerns. These policymakers may be less likely to have preempted EJ critiques in the draft policy.

5.2.3.2 Public Pressure Hypotheses

> *General Pressure Hypothesis*: Policies are more likely to change when they receive more public attention (e.g., more public comments).

If policymakers respond to public pressure, policy should be more likely to change when more people comment on a draft policy.

The competing intuition against the *General Pressure Hypothesis* is again that large numbers of comments indicate policy processes that were already salient before the public pressure campaign. Policymakers anticipate public scrutiny and are thus more likely to have stated their final position in the draft policy. If this is the case, policies with more public comments should be *less* likely to change. Public attention could also be unrelated to policy change, meaning that policymakers are neither anticipating nor responding to public attention in writing or revising policy documents.

> *Specific Pressure Hypothesis*: Policies are more likely to address an issue when they receive more public attention (e.g., more public comments) *and* at least one comment raises that issue.

This hypothesis asserts that the overall level of public attention will condition policy responses to specific claims–it is the interaction between the number of total public comments and at least one of those comments raising EJ concerns that makes policy more likely to address EJ.

The competing intuition against the *Specific Pressure Hypothesis* is again that large numbers of comments indicate high-salience rulemakings where policymakers are more likely to anticipate public scrutiny, including how they did or did not address specific issues like environmental justice. If policymakers anticipate public scrutiny, they may be more likely to preempt EJ concerns and state their final position in the draft policy.

5.3 Testing the Theory

5.3.0.1 "Environmental Justice" as a Boundary-drawing Tool

The politics of environmental justice has several convenient properties for studying the policy impact of social movements. First, discourse around policies framed as "environmental" issues are, unlike issues like civil rights and immigration, inconsistently racialized and, unlike issues like taxes and spending, inconsistently focused on *distributions* of costs and benefits. This means that policies may or may not be framed in environmental justice terms. Despite policy almost always having disparate impacts, an "environmental" frame often creates a human-environment distinction and shifts attention to non-human objects such as air, water, food, or landscapes and away from the distribution or protection from them when they are contaminated. By focusing on distributions of costs and benefits, fights over EJ analyses differ from more traditional utilitarian or preservationist analyses.

Second, compared to other ideas around which people mobilize, "environmental justice" is a fairly distinctive phrase. Most people who use this phrase share a general definitional foundation. Even attempts to reframe the term (e.g., to focus on class rather than race or jobs rather than health) come about as dialectical moves related to the term's historical uses. Thus, when "environmental justice" appears in a text, it is rarely a coincidence of words; its appearance is a result of the movement or reactions to it.

Third, this phrase appears frequently when the idea is discussed. There are few synonyms. Groups raising equity concerns on "environmental" issues commonly use the phrase "environmental justice." Those who use narrower, related terms–including the older concept of "environmental racism" and the newer concept of "climate justice"–almost always use "environmental justice" in their advocacy as well.

Finally, the term is relevant to rulemaking records in particular because Executive Order 12898 issued in 1994 by President Clinton—"Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations"—directs all agencies to consider EJ implications of their actions and policies. Executive Orders from Presidents Obama and Biden and statements from agency heads in every administration have since interpreted and reinterpreted parts of this Order, all with direct implications for rulemaking. This does not mean that all draft or final rules address EJ, but when they do, they tend to cite Executive Order 12898 and explicitly discuss environmental justice. For the same reason, commenters who critique draft rules also cite this Executive Order and use this language. Again, this is true both for movement activists and reactionary efforts to redefine the term. While EO 12898 does not itself create a right to sue agencies, courts may strike down rules for failing to comply with procedural requirements of the Administrative Procedures Act (APA) and National Environmental Policy Act (NEPA) if the agency fails to "examine the relevant data" or "consider an important aspect of the problem" (*Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 1983). This can include an agency's 12898

EJ analysis: "environmental justice analysis can be reviewed under NEPA and the APA" (*Communities Against Runway Expansion, Inc. v. FAA*, 2004).

5.3.1   Data

To examine whether EJ activists and public pressure campaigns shape policy documents, I collect the text of all draft rules, public comments, and final rules from regulations.gov. Then, I select rulemaking documents from agencies that published at least one rule explicitly addressing EJ from 1993 to 2020. This yields over 25,000 rulemaking dockets from 40 agencies. 12,257 of these have both a proposed and final rule.[3]

Despite E.O. 12898, most rules do not address EJ. Figure 5.1 shows that most draft and final rules (about 90%) do not mention "environmental justice." Interestingly, the total number of final rules and the percent of the total addressing EJ have remained fairly stable for the time period where regulations.gov data are complete (after 2005). Every year from 2006 to 2020, these agencies published between 2000 and 3000 final rules, of which between 200 and 300 addressed EJ.

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[3]Some final rules are published without a draft, and some proposed rules are withdrawn or never finalized. Additional descriptives on each type of rule are available in the online appendix.
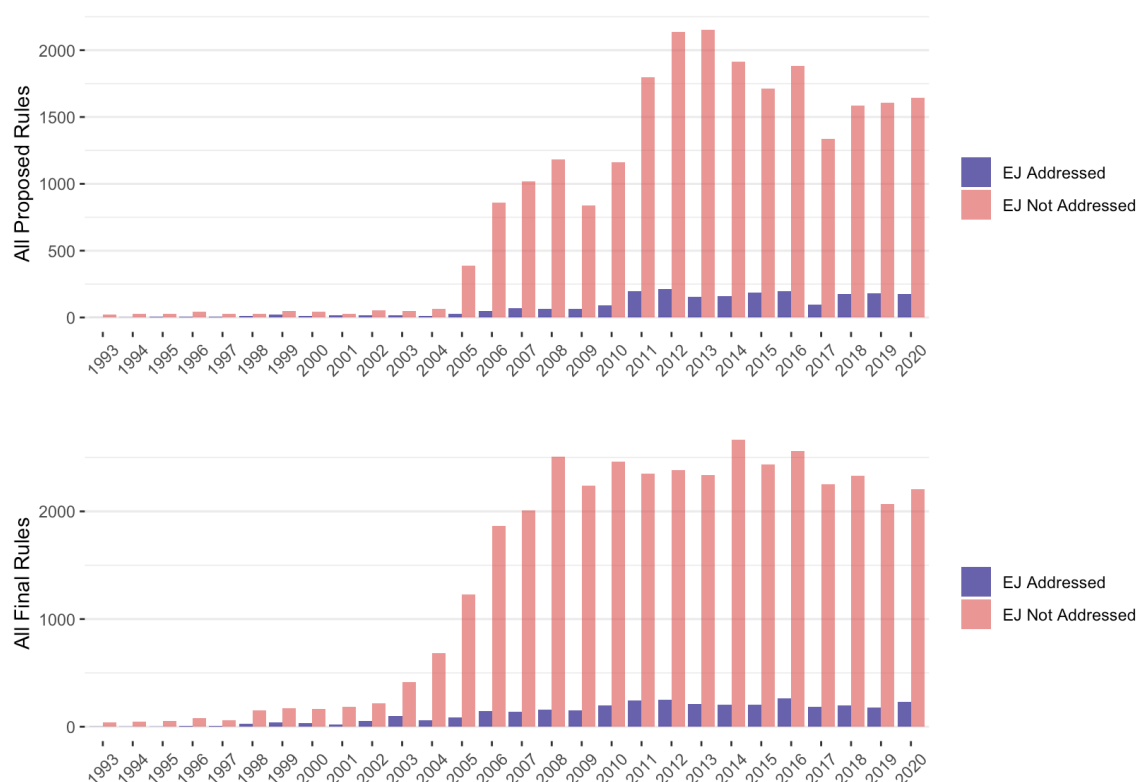
Figure 5.1: Proposed and Final Rules by Whether they Address Environmental Justice.

Even at the Environmental Protection Agency (EPA), where most policies are clearly framed as "environmental" issues, a consistent minority of rules address EJ. Many agencies that make policy with clear EJ effects almost never address EJ. These include the Fish and Wildlife Service (FWS), Department of Housing and Urban Development (HUD), National Oceanic and Atmospheric Administration (NOAA), Nuclear Regulatory Commission (NRC), and the Office of Surface Mining (OSM). A majority of rules addressed EJ only in a few years at a few agencies that publish relatively few rules, including the Council on Environmental Quality (CEQ), Army Corps of Engineers (COE), Federal Emergency Management Agency (FEMA), Forest Service (FS), and several Department of Transportation agencies (the Federal High Way Administration (FHWA), Federal Motor Carrier Safety Administration (FMCSA), Federal Railroad Administration (FRA), and Federal Transit Administration (FTA)). Figure 5.2 shows the number of rulemaking projects over time by whether they ultimately addressed EJ at agencies that either published more than ten rules addressing EJ or receiving over 100 comments raising EJ concerns.
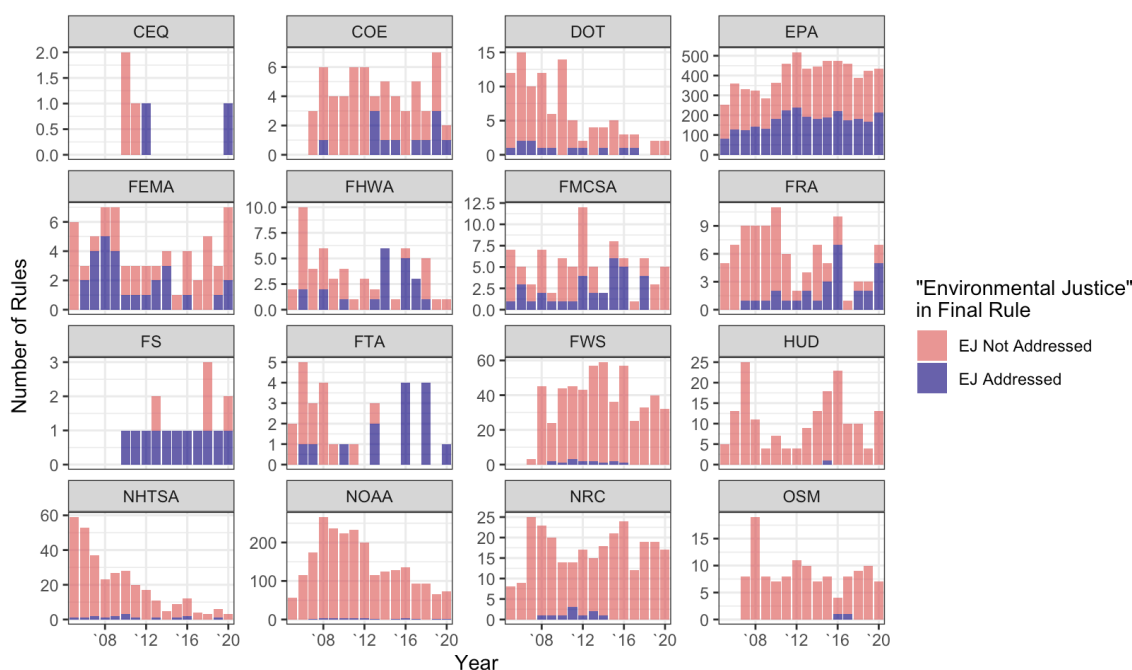
Figure 5.2: Number of Proposed and Final Rules Addressing Environmental Justice at the Council on Environmental Quality (CEQ), Army Corps of Engineers (COE), Department of Transportation (DOT), Environmental Protection Agency (EPA), Federal Emergency Management Agency (FEMA), Federal High Way Administration (FHWA), Federal Motor Carrier Safety Administration (FMCSA), Federal Railroad Administration (FRA), Forest Service (FS), Federal Transit Administration (FTA), Fish and Wildlife Service (FWS), Department of Housing and Urban Development (HUD), National Highway Transportation Saftey Administration (NHTSA), National Oceanic and Atmospheric Administration (NOAA), Nuclear Regulatory Commission (NRC), and Office of Surface Mining (OSM)

5.3.1.1 Comments

Figure 5.3 shows the number of comments on each proposed rule published between 1993 and 2020. Light red circles indicate rules where no commenters raised EJ concerns. Dark blue Triangles indicate rules where they did. The bottom row of plots shows the subset of rules where "environmental justice" appeared in neither the draft nor the final rule. The middle row of plots shows rules where "environmental justice" appeared in the final but not the draft. My first analysis compares these two rows. The top row of plots shows rules where "environmental justice" appeared in both the draft and final rule. My second analysis compares rules in this first row. Predictably, commenters most often raised EJ concerns on rules in the first row.
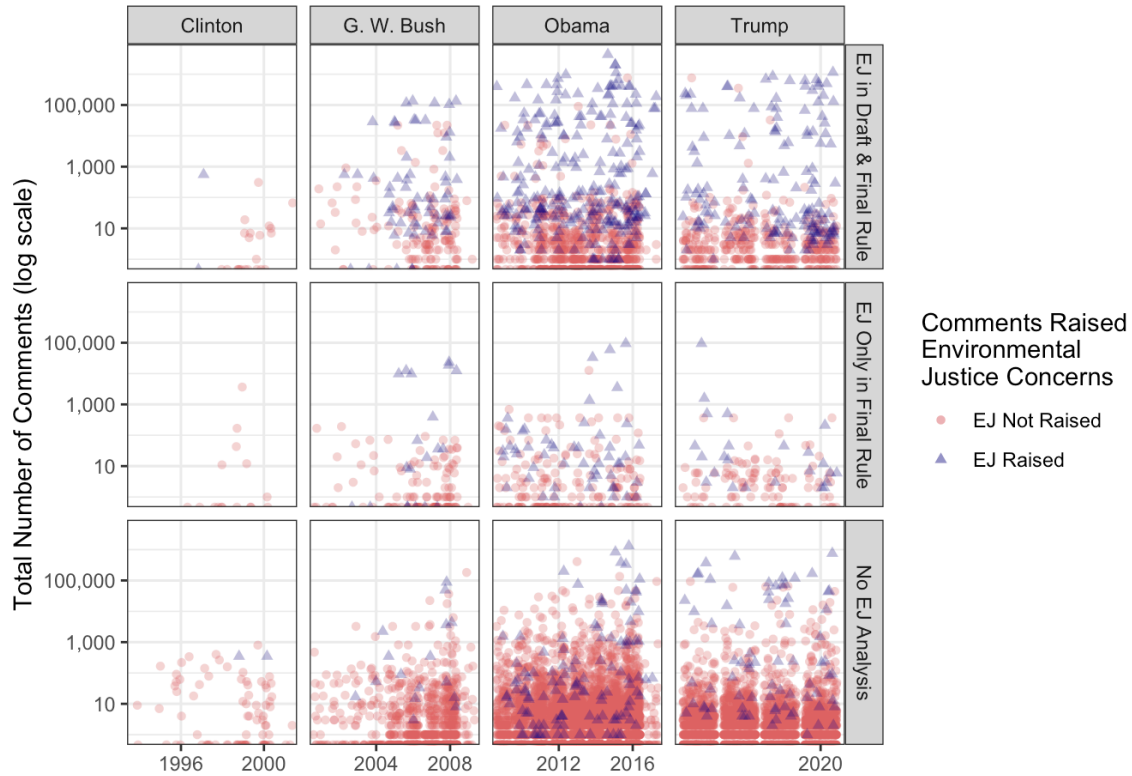
Figure 5.3: Number of Comments on Proposed and Final Rules and Whether Comments Raised Environmental Justice Concerns

5.3.1.2   *Interest Groups and Second-order Representation*

When lobbying during rulemaking, groups often make dubious claims to represent broad segments of the public (Seifter, 2016). It is thus insufficient to know which groups participate. We also need to know who these groups claim to represent and whether those people are actually involved in the decisions of the organization.

I investigate who is raising EJ concerns in two ways. First, I identify the top organizational commenters such as tribes, businesses, and nonprofits that are using EJ language and investigate whom these groups represent. Second, for comments where a commenter signed their name, I compare surnames to their racial and ethnic identity propensities with respect to the U.S. Census. Together these two pieces of information allow me to comment on "second-order" representation, i.e., the extent to which public comments are representative of the groups they claim to represent (Seifter, 2016).

Organizations Raising EJ Concerns on the Most Rulemaking Dockets   The top mobilizer of comments mentioning "environmental justice" between 1993 and

2020 was the Sierra Club, with over 340,000 comments on dozens of rules. While it is a membership organization whose members pay dues, elect the leaders of local chapters, and have some say in local advocacy efforts, its policy work is directed by a more traditional national advocacy organization funded by donations, including over \$174 million from Bloomberg Philanthropies that funded several of the public pressure campaigns in these data. The Sierra Club does have a major program arm dedicated to Environmental Justice that works with local partners "to foster the growth of the environmental justice movement so that oppressed communities will find justice and everyone can experience the benefits of a healthy and sustainable future." communities, but it is not clear to what extent those individuals have a formal say in the national organization's lobbying decisions. As a federated organization with many local efforts, it is difficult to generalize about second-order representation, which likely varies across its campaigns. The National Board of Directors adopted a statement on social justice in 1993 and principles on environmental justice in 2001. The national website does contain regular Spanish language content.

The second most prolific organizer of EJ comments was Earthjustice, with over 175,000 comments on many of the same rules that the Sierra Club lobbied on. Earthjustice is primarily engaged in litigation on behalf of environmental causes. Their website boasts 2.2 million supporters, but it is not clear who they are or if they play any role in the advocacy strategy. A search on the website returns 360 results for "Environmental Justice," with the top results from staff biographies who work on more local or targeted campaigns, such as environmental conditions for the incarcerated, but the EJ language used on the main page is relatively vague. For example, "We are fighting for a future where children can breathe clean air, no matter where they live." (Earthjustice, 2017). The website does contain Spanish language content.

The Natural Resources Defense Council is similar to Earthjustice–a national non-profit funded by donations and focused on litigation–but they also lobby and organize public pressure campaigns, including over 160,000 comments mentioning environmental justice.

CREDO Action and MoveOn are more generic progressive mobilizers who lack a systematic focus on EJ issues, but occasionally leverage their very large membership and contact lists to support EJ campaigns led by others (MoveOn.org, 2017; CREDO, 2017).

The Alliance for Climate Protection is more of an elite political group founded by former Vice President Al Gore.

We Act and Communities for a Better Environment both have environmental justice in their central mission statement. We Act was founded by community leaders in Harlem, NY, to fight environmental racism and advocate for better air quality (WEACT, 2017). Communities for a Better Environment has projects throughout California but is particularly active in Oakland (CBECAL, 2017). Much of the content of their website is in both English and Spanish. Both organizations focus primarily on "low-income communities of color" and thus frame their work primarily in terms

of race and class. While both organizations participated in national policymaking We Act is more focused on communities in Harlem and New York, whereas Communities for a Better Environment casts a wider frame: "CBE's vision of environmental justice is global–that's why the organization continues to participate in such international efforts as the Indigenous Environmental Network and the Global Week of Action for Climate Justice" (CBECAL, 2017).

While not a large portion of EJ comments, companies repeatedly raise research about the unequal impacts of policy in order to frame these issues as a legitimate but unresolved scientific debate that is not yet conclusive enough to base regulations on. For example, in one comment, the Southern Company wrote:

> "People with lower SES are exposed to almost an order of magnitude more traffic near their homes (Reynolds et al., 2001), and live closer to large industrial sites and are exposed to more industrial air pollution (Jerrett et al., 2001). Legitimate health concerns must be addressed. But adopting standards with a scientific basis so uncertain that health improvement cannot be assured is not sound public health policy."

Like many companies, they claim to represent their customers: "electric generating companies and their customers are expected to bear much of the burden" of regulations (Hobson, 2004).

Overall, regarding second-order representation, it appears that the groups most often using the language of environmental justice may do so sincerely but do not themselves represent affected communities. Several groups representing local communities and led by community leaders have participated, but not nearly as often or with the same intensity as the "big greens." This highlights the importance of resources as a condition for mobilizing. Not all groups who may benefit from generating political information are able to leverage it because they lack the resources to fund a campaign. However, smaller, more member-driven groups may partner with national groups that have more resources to mobilize on their behalf. Finally, a third, much less common type of commenter raises EJ issues as a way to reframe them as ongoing debates and thus undermine their urgency. I call this reason for engaging as "breaking a perceived consensus." In a way, the fact that an energy company felt compelled to acknowledge and question EJ concerns suggests their importance for policy outcomes.

Commenter Race   To estimate the racial distribution of commenters using EJ language, I select commenters who signed with a surname appearing in census records. Figure 5.4 shows a probabilistic racial distribution of commenters who raise EJ concerns in their comments based on the distribution of self-reported racial identities associated with surnames as recorded in the 2010 census.[4] I estimate this distribution using the proportion of people with a given surname identified as belonging to

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[4]I recode "Hispanic" as "Latinx"

each racial category (from this limited set of options). This approach does not assign specific individuals to racial categories. Instead, it represents each commenter as a set of probabilities adding up to 1. The estimated racial distribution of the sample is the sum of individual probabilities.
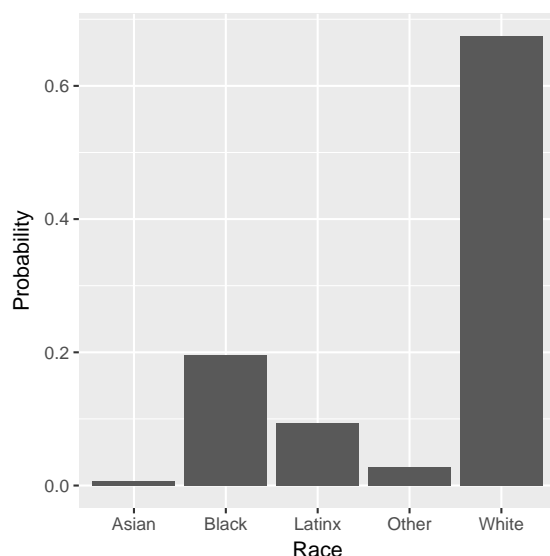

Figure 5.4: Estimated Racial Distribution from Census Surnames of Commenters raising "Environmental Justice" Concerns in Rulemaking

Compared to the overall distribution in the 2010 census, this sample of commenters appears to be disproportionately Black and less than proportionately Latinx or Asian, with just slightly fewer Whites relative to the national population. This makes sense given that environmental justice theorizing and activism have been led by African Americans (Bullard, 1993).

5.3.2 Tracing Ideas Through Rulemaking: "Environmental Justice" as a Contested Concept

Using an environmental justice frame does not always imply the same communities of concern. Environmental justice emerged from movements against environmental racism, especially the disposal of toxic materials in predominantly-Black neighborhoods (Bullard, 1993). However, the term quickly took in a broader array of meanings, encompassing various marginalized groups. President Clinton's 1994 Executive Order on Environmental Justice required all parts of the federal government to make "addressing disproportionately high and adverse human health or environmental effects of programs, policies, and activities on minority populations and low-income populations" a core aspect of their mission. This meant considering disproportionate effects of policies during rulemaking.

In 2005, Environmental Protection Agency (EPA) political appointees reinterpreted the Order, removing race as a factor in identifying and prioritizing populations. This move was criticized by activists and two reports by EPA's own Office of Inspector General. President Obama's EPA Administrators named EJ as one of their top priorities, but they also faced criticism from activists for only paying lip service to environmental racism.

In an October 2017 proposed rule to repeal restrictions on power plant pollution, the Trump EPA acknowledged that "low-income and minority communities located in proximity to [power plants] may have experienced an improvement in air quality as a result of the emissions reductions." Because the Executive Order requires attention to environmental justice and because the Obama EPA discussed it when promulgating the rule, the environmental justice implications could not safely be ignored. However, the Trump EPA contended that the Obama EPA "did not address lower household energy bills for low-income households [and that] workers losing jobs in regions or occupations with weak labor markets would have been most vulnerable" (EPA 2017). Like the Southern Company's comments and other regulated industry commenters, these statements frame the distribution of jobs and electricity costs as EJ issues to push back against policies that would equalize the distribution of health impacts from pollution.

The major conflict over the role of race in EJ analyses is one of many conflicts that the environmental justice movement has caused to be fought somewhat on its terms. To illustrate how these definitional conflicts shape rules and rulemaking, the next section briefly reviews the decades-long policy fight over regulating Mercury pollution.[5]

5.3.2.1   *The Evolving Distributional Politics of Mercury Pollution*

Fundamental definitions of the public good and minority rights are implicit in agency rules. The public comment process offers an opportunity to protest these definitions. Protest is one way that marginalized groups can communicate opinions on issues to

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[5]This case and other examples in this article were not selected as the most similar, most different, or a representative sample. They emerged from reading hundreds of rulemaking documents where agencies did and did not respond to comments raising EJ concerns. Their purpose is to assess whether the cases in the quantitative analysis are plausibly what they appear to be: that changes in rule text are, sometimes, causally related to public comments and that non-changes are cases of agencies disregarding comments, not some accident of the data or measures. Tracing a few rulemaking processes also helped to avoid analytic pitfalls. For example, one case where an agency did an EJ analysis and then appeared not to respond to a comment discussing EJ was, in fact, due to the fact that the commenter included an annotated version of the draft rule their comment, adding only "no comment" next to the 12898 section. To correct this, I removed text copied from the proposed rule from comments in pre-processing. The qualitative reading also confirmed other key assumptions, such as the fact that advocates do, in fact, use "environmental justice" when they raise distributional concerns, even on many rules that are not about issues traditionally considered "environmental" because of its power to give distributional justice claims legal purchase.

government officials (Gillion, 2013). In the EPA's Mercury Rules, two such issues were decisive. First, as with many forms of pollution, mercury-emitting power plants are concentrated in low-income, often non-White communities. Second, certain populations consume much more locally-caught freshwater fish, a major vector of Mercury toxicity. Studies inspired by the political controversy around the Mercury Rules found high risk among certain communities, including "Hispanic, Vietnamese, and Laotian populations in California and Great Lakes tribal populations (Chippewa and Ojibwe) active on ceded territories around the Great Lakes" (EPA 2012). Thus the standards that EPA chooses are fundamentally dependent on whom the regulation aims to protect: the average citizen, local residents, or fishing communities. This decision has disparate effects based on race and class because of disparate effects based on geography and cultural practices.

In December 2000, when the EPA first announced its intention to regulate Mercury from power plants, the notice published in the Federal Register did not address EJ issues, such as the disparate effects of mercury on certain populations; it only discussed results in reference to "the U.S. population" (EPA 2000). When the first draft rule was published, it only discussed the effects of the rule on regulated entities, noting that

> "Other types of entities not listed could also be affected" (EPA 2002).

Commenting on this draft, Heather McCausland of the Alaska Community Action on Toxics (ACAT) wrote:

> "The amount of methyl-mercury and other bioaccumulative chemicals consumed by Alaskans (especially Alaskan Natives) could potentially be much higher than is assumed... [This could increase] the Alaskan Native mortality rate for babies, which according to the CDC, is 70% higher than the United States average. Indigenous Arctic & Alaskan Native populations are some of the most polluted populations in the world. Global transport & old military sites contaminate us too."

By citing the CDC, McCausland's comment provided both technical and distributive information. As allies mobilized, public pressure to address the disparate impacts of the mercury regulation mounted. After receiving hundreds of thousands of comments and pressure from tribal governments and organizations, a revised proposed rule echoed McCausland's comment noting that

> "Some subpopulations in the U.S., such as Native Americans, Southeast Asian Americans, and lower-income subsistence fishers may rely on fish as a primary source of nutrition and/or for cultural practices. Therefore, they consume larger amounts of fish than the general population and may be at a greater risk of the adverse health effects from Hg due to increased exposure" (EPA 2004).

After nearly a million additional public comments, a further revised proposed rule ultimately included five pages of analysis of the disparate impacts on "vulnerable populations" including "African Americans," "Hispanic," "Native American," and "Other and Multi-racial" groups (EPA 2011). In the final rule, "vulnerable populations" was replaced with "minority, low income, and indigenous populations" (EPA 2012). The EPA had also conducted an analysis of sub-populations with particularly high potential risks of exposure due to high rates of fish consumption as well as additional analysis of the distribution of mortality risk by race.

Of this second round of comments, over 200 unique comments explicitly raised EJ issues. The Little River Band of Ottawa Indians expressed the Tribe's

> "frustration at trying to impress upon the EPA the multiple and profound impacts of mercury contamination from a Tribal perspective. Not to mention the obligations under treaties to participate with tribes on a 'Government to Government' basis. At present, no such meetings have occurred in any meaningful manner with EPA Region V, the EPA National American Indian Environmental Office, nor the State of Michigan's Department of Environmental Quality."

They conclude that "Although EPA purported to consider environmental justice as it developed its Clean Air Mercury Rule, it failed utterly. In this rulemaking, EPA perpetuated, rather than ameliorated, a long history of cultural discrimination against tribes and their members" (Sprague 2011).

Did comments like these play a role in EPA's changed analysis of whom Mercury limits should aim to protect? Given the many potential sources of influence, it may be difficult to attribute causal effects of particular comments on a given policy. However, comments may serve as a good proxy for the general mobilization of groups and individuals around an administrative process, and it is not clear why the EPA would not address EJ in the first draft of a rule and then add it to subsequent drafts in the absence of activist pressure. Electoral politics does not offer an easy explanation. The notice proposing the Mercury Rule was issued by the Clinton administration, the same administration that issued the Executive Order on Environmental Justice, and the subsequent drafts that did address EJ issues were published by the Bush administration, which had a more contentious relationship with EJ advocates, while Republicans controlled both houses of Congress. The expansion of the analysis from one draft to the next seems to be in response to activist pressure.

5.3.3 Measuring Policy Change

Having shown how public comments and pressure can influence policy texts, I assess the general relationship between comments and policy change. I use two indicators of policy change to model the effect of public comments on policy: *whether* a rule addresses EJ and *how* it addresses EJ. Both measures represent a relatively low bar,

indicating whether the agency explicitly paid any attention to EJ. This is appropriate given that prior research shows little to no effect of public comments from advocacy groups and little attention to EJ in particular.

5.3.3.1 Measure 1: Adding Text Addressing EJ to Final Rules

For the subset of draft rules that did not address EJ, I measure whether agencies added any mention of "environmental justice" in the final rule. Such additions usually take the form of an "E.O. 12898" section where the agency justifies its policy changes with respect to some concept(s) of environmental justice. The next most common addition occurs in the agency's response to comments, explaining how the rule did not have disparate effects or that they were insignificant.

Sometimes an agency will respond to a comment and add a 12898 section. For example, the EPA responded to several commenters, including Earthjustice, the Central Valley Air Quality Coalition, the Coalition for Clean Air, Central California Environmental Justice Network, and Central California Asthma Collaborative: "EPA agrees it is important to consider environmental justice in our actions and we briefly addressed environmental justice principles in our proposal." EPA had, as the commenters noted, not in fact addressed environmental justice in the proposed rule, which approved California rules regulating particulate matter emissions from construction sites, unpaved roads, and disturbed soils in open and agricultural areas. EPA did add a fairly generic 12898 section to the final rule but did not substantively change its position.

Less frequently, an agency may explicitly dismiss a comment and decline to add a 12898 section. For example, EPA responded to a comment on another rule, "One commenter stated that EPA failed to comply with Executive Order 12898 on Environmental Justice…We do not believe that these amendments will have any adverse effects on…minority and low-income populations…Owners or operators are still required to develop SSM plans to address emissions…The only difference from current regulations is that the source is not required to follow the plan" (71 FR 20445). As these examples illustrate, agencies may add text addressing environmental justice that would in no way satisfy critics. This measure merely indicates whether the agency engaged with the claims.

Most frequently, agencies neither responded to comments nor added a 12898 section.

5.3.3.2 Measure 2: Changing Text Addressing EJ in Final Rules

Where draft rules did address EJ, I measure whether a rule changed *how* it discussed "environmental justice" between its draft and final publication.[6] When an agency

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[6]Occasionally, there is more than one version of a proposed or final rule on a rulemaking docket. Here I opt for an inclusive measure of change that counts change from *any* proposed to *any* final

addresses EJ in the draft rule, it is almost always in a section about how it addressed E.O. 12898. In many cases, much of the text of final rules, including 12898 sections, remain exactly the same between draft and final versions. To measure change, I parse draft and final rules into sentences and identify sentences containing the phrase "environmental justice." If these sentences are identical, this indicates the agency did not engage with comments raising EJ concerns.[7]

5.4 Results

5.4.1 Are final rules more likely to address environmental justice after comments do so?

This subsection presents results from an analysis of draft rules, comments, and final rules. Descriptively, where environmental justice is not addressed in the draft rule, a higher percent of rules add EJ language when comments raise EJ concerns. There is a large difference in the rate of addressing EJ between rules where commenters and did (33%) and did not raise EJ concerns (4%). However, in most cases, agencies did not respond at all to these commenters' concerns.

Overall rates of adding EJ in rules without EJ comments decreased over time, leveling out at 3% during the Obama and Trump presidencies. The rates of adding EJ when commenters did raise these concerns is consistently much higher, but it also decreases over time, from 57% under G.W. Bush to 26% under Trump. EPA had a relatively high baseline rate of change (10%), which increased to 52% when comments raised EJ concerns. Most other agencies also added EJ at a higher rate when comments raised EJ concerns; indeed, most agencies almost never do so when comments did not raise EJ concerns.[8]

Given differences across presidents, agencies, and the number of comments, I estimate logit regression where the outcome is whether environmental justice was addressed in the final rule (Models 1 and 2 in Table 5.1). The predictors are whether EJ was addressed in the comments, the number of unique comments addressing EJ, the total number of comments, and the interaction between whether EJ was raised and the total number of comments received. Models 3 and 4 are exactly the same as 1 and 2, except that the outcome is now change in how EJ is discussed (described in

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rule. This means that if the change occurred between the first and second draft of a proposed rule, it is counted as a change. This best captures the concept of rule change. However, estimates are similar if we only count cases where a change occurred between *every* version of the rule.

[7]An alternative approach would be to parse documents by section and assess whether E.O.12898 sections are identical. Parsing by sentences has three advantages: it is computationally faster, it avoids problems with section numbering and other frustrations with section matching, and it captures attention to EJ outside of this section, especially in the section responding to comments. If an agency is paying attention to EJ issues, sentence matching will be most likely to detect it. However, other measures, such as the percent of EJ sentences changed, the percent of words in a 12898 section that changed, or the change in topic proportions (Judge-Lord, 2017), could be useful in future work.

[8]More discriptive statistics and figures are available in the online appendix.

Table 5.1: Logit Regression Predicting Change in Rule Text

	1	2	3	4
Dependent Variable	EJ Added	EJ Added	EJ Changed	EJ Changed
EJ Comment	3.363***	2.414***	0.717***	0.748***
	(0.221)	(0.240)	(0.243)	(0.246)
Log(Comments+1)	0.068**	0.232***	-0.147***	-0.156***
	(0.028)	(0.036)	(0.032)	(0.033)
Unique EJ Comments	0.005	0.227***	0.032**	0.036**
	(0.006)	(0.068)	(0.014)	(0.014)
EJ comment*Log(Comments+1)	-0.227***	-0.226***	0.071	0.069
	(0.052)	(0.072)	(0.050)	(0.051)
President FE	X	X	X	X
Agency FE		X		X
Num.Obs.	11721	11721	1885	1885
AIC	3868.6	3125.6	2180.4	2166.5
BIC	3927.5	3464.6	2224.7	2327.2
Log.Lik.	-1926.296	-1516.818	-1082.192	-1054.252

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

the next section). All models include fixed effects for the presidential administration. Models 2 and 4 also include fixed effects for agency. Thus, estimates in Models 1 and 3 include variation *across* agencies, whereas estimates in models 2 and 4 rely on variation *within* agencies. All estimates rely on variation *within* the presidential administration. All predicted probabilities shown below include agency fixed effects, models 2 and 4.

5.4.1.1 *Predicted Probability of Added Text*

As logit coefficients are not easily interpretable, Figures 5.5, 5.6, and 5.7 show the predicted probability of a final rule addressing environmental justice when the draft rule did not.

Controlling for average rates of policy change per agency and the number of comments, Figure 5.5 shows a large difference in the probability of policy change when raising EJ concerns. This supports the "Distributive Information Hypothesis." There is a decrease in rates of adding EJ language after the G.W. Bush Administration, but differences between presidents are small compared to the difference between rules that did and did not see EJ comments. Other variables at their modal values: the

EPA, zero additional EJ comments, and one comment total.[9]
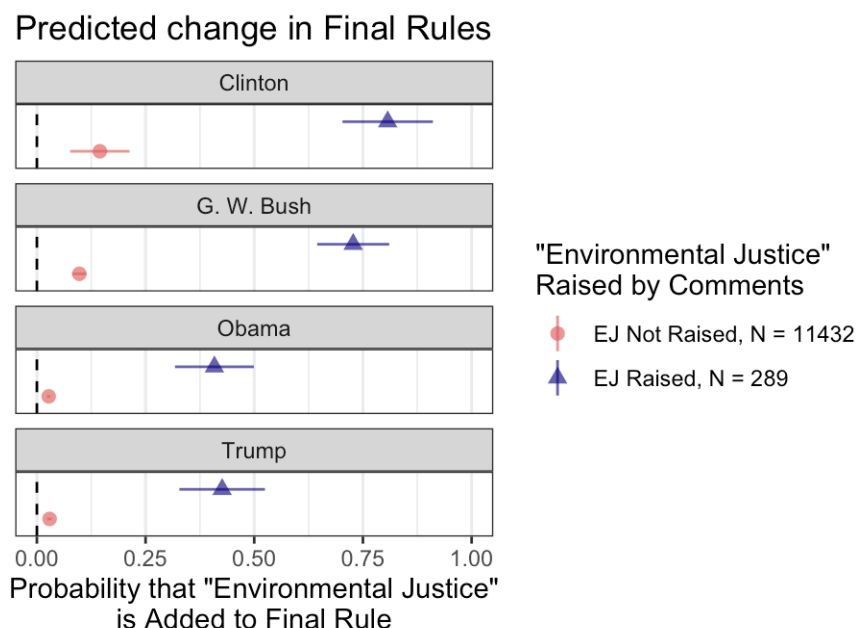
Predicted change in Final Rules

Figure 5.5: Probability that Environmental Justice is Added Between Draft and Final Rules by President

Figure 5.6 shows the probability of EJ language being added with a varying total number of comments. At low numbers of comments, environmental justice being raised in any one comment does have a decisive relationship with policy change. For rules with less than ten comments (most rules), one comment mentioning EJ is associated with a 30% increase in the probability that EJ will be addressed in the final rule. This supports the *Distributive Information Hypothesis*. However, the probability that an agency will add EJ language is still below 50%—even when comments raise EJ concerns, agencies tend not to address them.

As the number of comments increases, the probability that a rule will add text addressing EJ increases. This supports the *General Pressure Hypothesis*–policy change is more likely when there is more public attention to a policy process. At the same time, there is a negative interaction between the number of comments and EJ comments–the more comments, the smaller the relationship between the comments raising EJ and EJ being addressed in the rule. In the small-portion of highly salient rules with 10,000 or more, the presence of comments raising EJ concerns no longer has a significant relationship with EJ being added to the text. With or without EJ comments,

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[9]All predicted probability plots below also show probabilities at the modal values for other variables: President Obama, the EPA, zero additional EJ comments, and the median number of total comments (one for models 1 and 2; four for models 3 and 4) unless otherwise specified.

these rules have about the same probability of change as those with just one EJ comment, just under 50%. This is evidence against the *Specific Pressure Hypothesis*—the number of comments matters (i.e., the scale of public attention) matters regardless of whether these comments explicitly raise EJ concerns. However, as shown in Figure 5.3, very few rules with 10,000 or more comments do not have at least one comment mentioning EJ, so there is a great deal of uncertainty about estimates of the impact of EJ comments with high levels of public attention.

The probability of "environmental justice" appearing in the final rule also increases with the number of unique comments that mention "environmental justice" in models 2, 3, and 4. Overall this supports the *Repeated Information Hypothesis.*
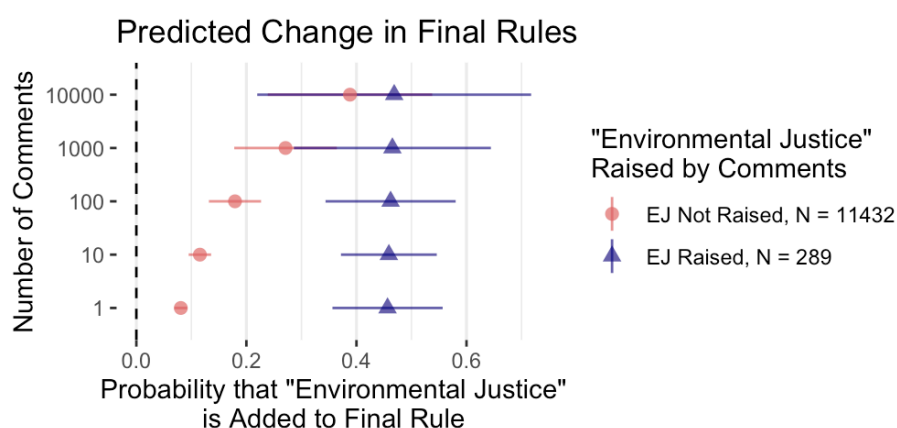

Figure 5.6: Probability Environmental Justice is Added Between Draft and Final Rules by Number of Comments

Figure 5.7 shows estimated variation in rates of adding EJ to final rules across agencies. Agencies with the largest average rates of adding EJ language are the agencies we would expect to be more receptive to EJ claims. While many agencies make what could be framed as "environmental policy," and all policy decisions have distributive consequences, institutions have norms and procedures that lead policymakers to see problems in different ways. For example, a few agencies have prominent internal guidance on EJ analysis in rulemaking, including the Environmental Protection Agency and the Department of Transportation (which includes the Federal Railroad Administration (FRA), Department of Transportation, Federal Motor Carrier Safety Administration (FMCSA), and the Federal Highway Administration (FHWA)). However, differences among agencies are fairly uncertain due to the small number of rules where EJ was added at most agencies. Thus, there is more support for the **Policy Receptivity Hypothesis** than against it, but differences between agencies with different missions and institutional practices regarding EJ is not clear cut.
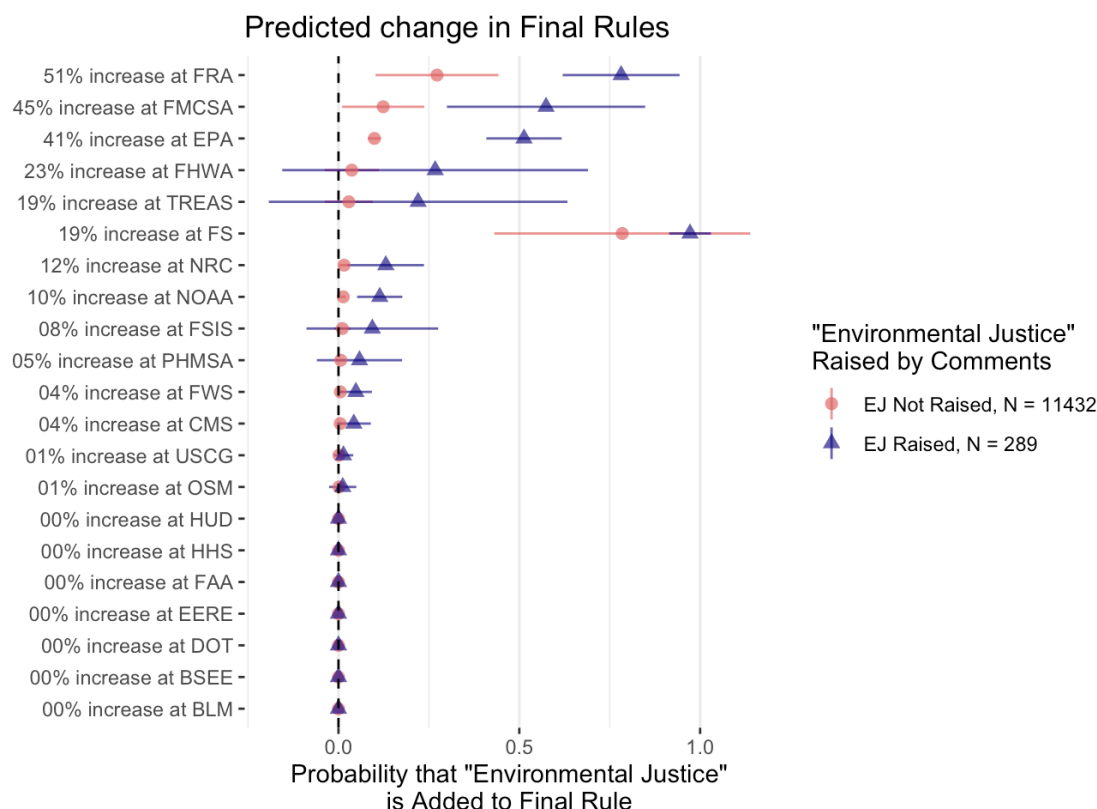
Figure 5.7: Probability Environmental Justice is Added Between Draft and Final Rules by Agency

The Forest Service (FS) has the highest predicted baseline rate of adding EJ to their rules. This may be because the forest service is mainly in the business of managing forests, leasing timber rights, and controlling wildfires. These types of decisions have acute distributional effects. Forest Service rule-writers may also simply have an institutional practice of addressing E.O.12898. Similarly, the Federal Railroad Administration, Federal Highway Administration, Federal Motor Carrier Safety Administration all have large baseline rates of adding EJ to final rules. These agencies are making decisions about infrastructure projects with implications for neighborhood environments and air quality. Environmental justice may often come up. Research agencies, including the Nuclear Regulatory Commission (NRC), National Oceanographic and Atmospheric Administration (NOAA), also have small but significant baseline rate of adding EJ to final rules.

5.4.2 Are rules more likely to change how they address environmental justice when comments mention it?

Turning to rules that do address EJ in the draft, we also see responsiveness to comments raising EJ concerns, now measured as whether any sentences containing "environmental justice" changed between draft and final rule.

Most rules that addressed EJ in the draft were published by the EPA, which had a high rate of baseline change, which increased when comments raised EJ concerns. Other agencies had too few rules to make strong inferences, but many changed how they discussed EJ 100% of the time when comments raised it, while inconsistently doing so when comments did not.

Models 3 and 4 in Table 5.1 are the same as Models 1 and 2, except that the dependent variable is now whether any sentences mentioning EJ changed between the draft and final rule.

5.4.2.1 Predicted Probability of Changed Text

Controlling for average rates of change per agency and the number of comments, Figure 5.8 shows little difference in baseline rates of adding EJ language across the Bush, Obama, and Trump presidencies. All are significantly lower than the rate in the Clinton administration, which could be a result of Clinton's Executive Order or simply an artifact of the limited sample of rules posted to regulations.gov before the mid-2000s.
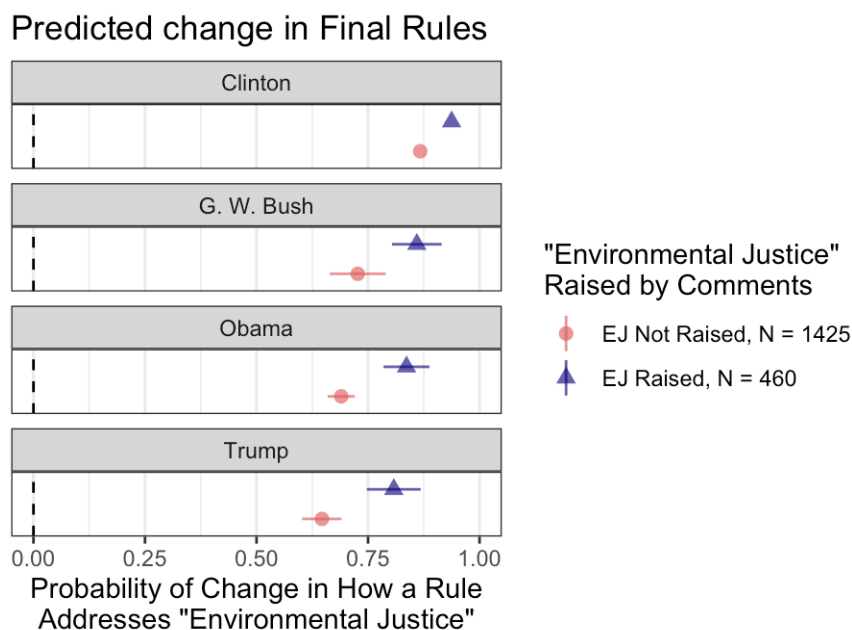
Figure 5.8: Predicted Change in *How* Environmental Justice is Addressed Between Draft and Final Rules by President

The relationship between the total number of comments and policy change is in the opposite direction posited by the *General Pressure Hypothesis*. The logged total number of comments has a significantly negative relationship with the probability the final rule text changes. The more comments there are on a proposed rule, the less likely it is to change. Rules are more likely to change when they receive *fewer* comments. The total number of comments thus has the opposite relationship to *how* rules that already addressed EJ changed as it did to *whether* rules added any EJ text. While the *General Pressure Hypothesis* held for adding EJ text, the opposite is true for changing a text that already addressed EJ. Instead, this result supports the competing intuition that more salient rules may be harder to change because the agency has anticipated public scrutiny. Their position set forth in the draft is more likely to be the position of the final rule.

As shown in Figure 5.9, EJ comments have a small but discernable relationship to the probability of rule change at typical (low) numbers of comments. As the total number of comments increases, the estimated difference between policies that did and did not receive EJ comments increases. When no comments mention EJ, a rule that receives 10,000 comments is much less likely to change than a rule that received 10,000. When comments do raise EJ concerns, more public attention has a smaller impact on the probability of policy change.
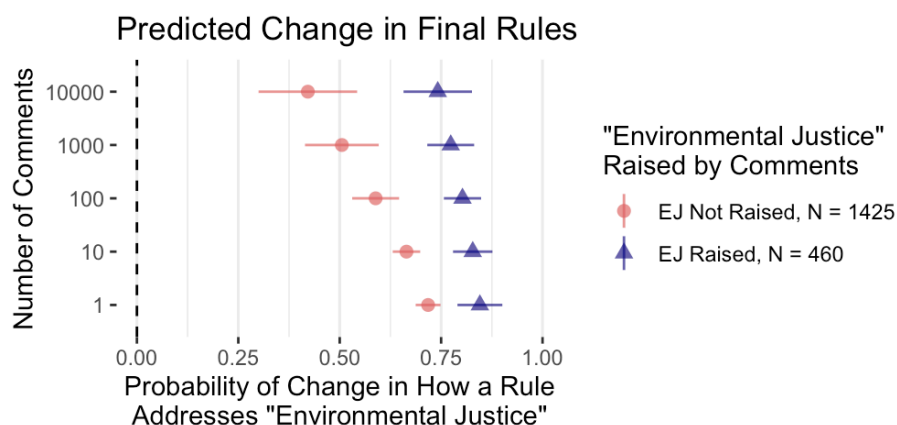
Figure 5.9: Predicted Change in *How* Environmental Justice is Addressed Between Draft and Final Rules by Number of Comments

5.5 Conclusion

The above analysis offers a rare, systematic account of a social movement's impact on specific policy outcomes across institutions and over time. It illustrates the importance of ideas in policymaking and how social movements can affect policy, even in technocratic processes like rulemaking, where most U.S. law is now made.

When activists raise issue frames like environmental justice, there is a higher probability that policymakers engage in discourse that highlights the distributive effects of policy. However, baseline rates of addressing environmental justice in rulemaking are so low that, even when activists raise EJ concerns, most policy documents pay no explicit attention to EJ. We see this general lack of attention across agencies and across the G.W. Bush, Obama, and Trump administrations. Indeed, there are surprisingly small differences across administrations in both baseline rates of considering EJ and the relationship between public pressure and policy change. There is a great deal of variation across agencies, suggesting that policy receptivity and responsiveness to public input are conditional on an institutional factors.

The policy outcomes suggested by an environmental justice analysis depend on how the populations of concern are defined. In some cases, those raising environmental justice concerns present it as an issue of wealth or income inequality, leading policy to account for disparate impacts on low-income populations. In other cases, groups raise claims rooted in cultural practices, such as fish consumption among certain tribes. As occurred in the Mercury Rule, the analysis in subsequent drafts of the policy used evaluative criteria specific to these communities. Thus, policy outcomes will depend on the specific environmental justice concerns raised.

Which communities and concerns are raised by activist campaigns depend on second-order representation in the organizations that mobilize public pressure. Ex-

amining which groups raise environmental justice concerns and second-order participation in these organizations' advocacy decisions validates some of the skepticism about who is able to participate and make their voice heard. Elite groups dominate policy lobbying, even for an issue like environmental justice. National advocacy organizations frequently request that regulators protect "all people" or even "low-income communities of color." However, this more generic advocacy may not lead to the same outcomes as groups that present more specific local environmental justice concerns unique to a community. In between generic progressive advocacy organizations and community-based organizations are high-capacity organizations like the Sierra Club and Earthjustice, which frequently partner with local organizations for more place-based litigation and campaigns and may be more likely to raise these local concerns in national policymaking. Given the importance of federal policy for local environmental outcomes, and advocacy organizations' potential to draw policymakers' attention to environmental justice issues, future research should examine the quality of partnerships between frontline communities and national advocacy organizations.

In the end, the above analysis offers some clarity on two poorly understood and rarely linked features of American politics: the policy impact of social movements and the role of public pressure in bureaucratic policymaking. It offers some hope that policymakers may address concerns raised through direct democracy mechanisms like public comment periods. At the same time, it highlights how policymakers rarely explicitly address the disparate impacts of policy, even when directly confronted with distributive justice concerns. Social movements do affect policy, but there are steep odds to overcome.

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