

Public Interest Group Lobbying Strategies During Notice and Comment Rulemaking

Zoe Ang

January 25, 2022

Abstract

Public interest groups organize and lobby to influence policy, but are constrained by their need for organizational maintenance. However, we know relatively little about how these competing goals impact public interest group lobbying during notice and comment rulemaking and by extension groups' ability to influence policy. I explore the relationship between the issue salience of an agency rule and public interest groups' lobbying behavior. I suggest that public interest groups are less likely to lobby to influence policy when issue salience is high, but are more likely to lobby for organizational maintenance as issue salience increases. Using comments on 35 rules finalized by the Environmental Protection Agency from 2005 to 2015, I find partial evidence for the former relationship and support for the latter. The results also indicate that less complex rules lead to public interest group lobbying for organizational maintenance. The multiple and sometimes competing goals of public interest groups should therefore be considered when studying the lobbying behavior of these organizations.

Public interest groups', conceptualized as member-based organizations that lobby for public goods¹, lobbying decisions are predicated on their expectation of success. While much literature defines success as securing desired policy, public interest group lobby for reasons other than policy influence, namely organizational maintenance or survival of their organization. The dual considerations of policy and organizational maintenance constrain public interest group lobbying behavior in all venues, including the notice and comment period rulemaking in federal agencies. Understanding the intra-organizational constraints faced by public interest groups can reveal conditions under which groups are more likely to lobby federal agencies.

By assuming that organized interests— an umbrella term that includes public interest groups and institutions such as businesses, trade associations, unions, universities, think tanks that lobby for private interests— lobby purely to influence policy, scholars find that only certain groups, namely business interests, influence policy (Haeder and Yackee 2015; McKay and Yackee 2007; Yackee 2006). Such research flares normative concerns about rulemaking agencies' bias towards corporations or highly resourced organizations. However, public interest groups are unique from other organized interests in that public interest groups lobby to maintain their organization. For example, public interest groups must energize their membership, appease donors, and sometimes lobby, knowing they will fail to win on policy, to appear active on an issue and secure allies for future or more important policy battles (Lowery 2007). While normative concerns about preferential treatment in policy outcomes are valid, the issue may be overemphasized considering that public interest groups may lobby to support their organization, rather than to influence policy.

Under what conditions are public interest groups more likely to lobby rulemaking agencies based on their multiple goals? Though the organized interest literature offers few decisive findings, authors do suggest that issue salience is a relevant predictor of lobbying behavior

¹Public interest groups are a type of organized interest. Organized interest further encompass businesses, trade associations, universities, hospitals, think tanks, and other types of organizations that may not have a formal membership and lobbying for private or economics gains. Many scholars refer to organized interests as interest groups.

(Hojnacki et al. 2012). Gormley Jr (1986) and Mahoney (2008) define an issue as salient if the issue is relevant to a generalist population, as indicated by media coverage. Conversely, Yackee (2006) defines salience with respect to the amount of lobbying a federal rule attracts. Prior work shows that issue salience influences both lobbying tactics (Mahoney 2008)² and policy outcomes (Hojnacki et al. 2012). I suggest that issue salience makes certain rules opportune for public interest groups to achieve their goals. Specifically, issue salience should affect public interest group lobbying in the following ways. First, groups have two main goals: (1) influence policy and (2) survive as an organization (Lowery 2007, 2013). Public interest groups use different lobbying strategies to achieve policy and organizational maintenance goals. With respect to policy influence, I argue that public interest groups are more likely to pursue policy when issue salience is low or moderate. Under lower issue salience, the scope of the issue is constrained to policy experts and invested stakeholders. Public interest groups can expect a rulemaking agency to seriously consider their policy input unadulterated by pressure from the president, Congress, media, and the public. Specifically, public interest groups should be more likely to submit comments that convey policy information during the notice and comment period of rulemaking when issue salience is low or moderate. With respect to organizational maintenance and survival, public interest groups are more likely to pursue this goal when issue salience is high. Groups will capitalize on the zeitgeist and mobilize individuals to comment on rules via mass comment campaigns. These campaigns convey a group's activism to the public and are designed to augment a public interest group's maintenance resources, such as money and members. Further, mass comment campaigns inform the rulemaking agency about public opinion but fail to provide meaningful policy information (Shapiro 2008). Therefore, public interest groups should lobby to maintain their organizations by capitalizing on public fervor when issue salience is high. In short, I expect that public interest groups are (1) more likely to submit policy oriented comments

²Mahoney (2008) finds that as issue salience increases, organized interests are more likely to work in coalitions. However, see Baumgartner et al. (2009) and Caldeira et al. (2000) who find no effect of salience on lobbying tactics in lobbying Congress and on federal judge nominations, respectively.

during the rulemaking process when issue salience is low or moderate and (2) more likely to advertise their lobbying activity to their membership and donors as issue salience increases.

To answer this question, I explore the relationship between issue salience and public interest groups' lobbying strategies targeting 35 rules finalized by the Environmental Protection Agency from 2005 to 2015. I measure public interest group policy lobbying based on a group's submission of a comment with policy substance. To measure public interest group lobbying for organizational maintenance, I count the number of mass comment campaigns sponsored by a public interest group that target a rule. I find some evidence that public interest groups are less likely to lobby to influence policy when issue salience is high. When issue salience is characterized with respect to the number of organized interests lobbying on a rules, public interest groups are less likely to submit substantive comments on high issue salience rules. However, this relationship is not evident based on an exogenous measure of issue salience, media attention. I find that public interest groups are more likely lobby for organizational maintenance by sponsoring mass comment campaigns as issue salience increases. The results imply that issue salience is contextually meaningful when public interest groups lobby for organizational maintenance, but that intra-organizational considerations may be weighted more heavily when lobbying to influence policy.

Lobbying is a rare event (Hojnacki et al. 2012), whether due to organizations' satisfaction with the the status quo, lack of resources, or, as I argue, non-policy related constraints. Accounting for the multiple goals of public interest groups provides another reason as to why lobbying occurs infrequently. What is more, considering a public interest group's need for survival can help researchers understand a group's policy behavior. In modeling these factors, my study leverages observational data to infer public interest group lobbying strategies, thus demonstrating an approach that mitigates reliance on interview research designs. Ultimately, my findings support the premise that multiple goals constrain public interest group lobbying behavior.

Notice and Comment Rulemaking and Public Interest Group Lobbying

In this section, I explain the rulemaking process as it relates to notice and comment procedures and the role of organized interests. Specifically, I highlight how interests can extract policy concessions from agencies by submitting comments that signal their willingness to capitalize on judicial review of rules. Further, I suggest that public interest groups lobby to achieve policy and organizational maintenance goals and accordingly employ different strategies during notice and comment rulemaking.

Notice and Comment Rulemaking

Tasked with implementing legislation, agencies promulgate rules. *Notice and comment rulemaking* is the most common form of rulemaking (Garvey 2017) and follows a process of rule drafting, publishing a proposed rule, opening the rule to public comment, drafting a final rule, and finalizing the rule.³ Though most rulemaking decisions are made within the rulemaking agency,⁴ organized interests may lobby agencies to potentially secure their policy preferences. The *notice and comment period* is the only opportunity that grants equal access to rulemaking. During this period, the public may submit feedback to agencies about the proposed rule, indicating what can be changed or clarified to better implement the authorizing statute. Importantly, submitting feedback during the notice and comment period allows a commenter to express both its policy preference and its commitment to realizing its preference. Final agency rules may be subject to judicial review, in which federal judges can overturn a rule that fails to meet rulemaking requirements or do not logically follow from information presented during rulemaking. Interested parties can explicitly or implicitly indicate their willingness to use judicial means to influence final policy by submitting

³For a schematic of the rulemaking process, see The Reg Map.

⁴Rulemaking nuances vary by agencies. Some agencies heavily rely on field experts and engage in extensive public outreach when making rules. Further, courts and Congress may affect agency decision to initiate rulemaking.

a comment that highlights an agency’s failure to comply with rulemaking requirements or write informed policy if a rule is finalized without change. If bureaucrats find the threat of judicial review credible, an agency may change its rule to align with a commenter’s policy preferences.

Public Interest Group Lobbying Goals and Strategies

Public interest groups account for two main goals (Lowery 2007, 2013; Solberg and Waltenburg 2006). Public interest groups pursue policy; a group forms and organizes around a shared policy value and acts to promote that value. More importantly, public interest groups pursue organizational maintenance, i.e. members and money (Lowery 2007). Should a group cease to exist, it cannot influence policy. This hierarchy influences when, where, and how public interest groups allocate their resources to achieve their goals (Lowery 2007; Solberg and Waltenburg 2006). However, pursuit of one goal may be at the expense of the other. For example, to promote organizational maintenance (i.e. advertising its activity in a highly populated lobbying environment with no expectation of influencing policy), public interest groups may act in ways that subvert policy goals (Solberg and Waltenburg 2006).

The notice and comment period allows public interest groups to pursue both policy and organizational maintenance goals by communicating policy and political information, respectively (Yackee 2014). Public interest groups attempt to influence policy by transmitting policy information in the form of substantive comments. *Substantive* comments identify rule content that should be changed or clarified and propose concrete policy alternatives. Further, the commenters support their positions with facts, studies, or data. Though agencies are not required to change rules according to public comments, final rules that contradict information presented during rulemaking may be overturned by federal courts. Thus, the potential of judicial review compels agencies to seriously consider policy information submitted by organized interests. Even when a public interest group has no intention of filing a lawsuit against an agency, citing such failure in a comment can compel an agency to concede policy,

because agencies are risk averse to lawsuits.⁵ Note that based on the observation of comments alone, it is difficult to know if a commenter submitted feedback with the expressed purposed of involving the courts after rule finalization. Regardless, substantive comments inherently convey substantive policy information and the pursuit of policy influence. Conversely, organized interests, including public interest groups, may lobby pro-forma by submitting a comment that is not substantive. A public interest group may provide vague feedback to an agency, express generalized support or dissent to a rule without offering policy alternatives, or address issues that are not within the scope of the rule. Though nonsubstantive comments constitute lobbying, the pro-forma nature fails to convey policy information and therefore is not considered lobbying to influence policy.

To lobby for organizational maintenance, public interest groups communicate political information and can do so by sponsoring mass comment campaigns.⁶ *Mass comment campaigns* consist of more than one identical or near duplicate comments by individuals that was directly motivated by an organized interest.⁷ Campaigns by public interest groups convey preference for or against proposed rules, but lack substantive policy information (Balla et al. 2019). Often, mobilized members have neither read the rule nor know that their comment is targeting a rule (Resh 2012). Though mass comment campaigns carry little to no immediate policy value in rulemaking, the magnitude of campaigns demonstrates a public interest group's political strength and helps a group to increase its membership and secure financial donors (Karpf 2010; Potter and Richardson 2016; Shulman 2009). By participating in the notice and comment period, public interest groups can lobby to influence policy and/or maintain their organization, depending on the strategy employed.⁸

⁵That is, public interest groups that submit comments may never go to court because the comment effectively convinced the agency to change the rule. Alternatively, the agency may respond to a comment in a manner that nullifies the value of the public interest group's comment in a lawsuit against an agency.

⁶Organized interests can communicate political information in a variety of ways. For example, Gordon and Hafer (2005) argues that corporate interests can signal their political strength to bureaucrats via political expenditures.

⁷In addition to public interest groups, trade associations sponsor mass comment campaigns. Campaigns by trade association tend to mobilize fewer individuals and can provide policy information about how the relevant rule impacts the trade (Potter 2017).

⁸Solberg and Waltenburg (2006) argue that organizations employ maintenance strategies in low visibility

It may appear that a public interest group should always submit a preserving comment or sponsor a mass comment campaign. However, both behaviors are costly. To learn about the existence and policies of a proposed rule, a public interest group must comb through the Federal Register, which is published daily, and be aware of how to participate. To justify allocation of resources to lobbying, a group must provide valuable policy or political information. Substantive comments can cost upwards of \$100,000 when the comment includes original research or was written by a contracted lawyer. Similarly, sponsoring a mass comment campaign requires resources to research the rule, craft a message, and create the campaign infrastructure. Though many public interest groups rely on their existing list of members, groups that want to expand their membership may use petition services such as Change.org, which charges approximately \$1.75 for the email address of one potential commenter. Thus, public interest groups may abstain from costly lobbying if their actions are unlikely to result in goal achievement.

A Theory of Issue Salience and Public Interest Group Lobbying

I argue that the salience of an issue, or the extent to which the issue is relevant to the general public (Baumgartner et al. 2009; Gormley Jr 1986; Mahoney 2008), addressed by a rule affects which of the two goals an interest group primarily pursues.⁹ I expect that public interest groups are less likely to lobby for policy by submitting substantive comments when issue salience is high. As issue salience increases, the number of organized interests

venues, such as courts or agencies, in addition to other policy lobbying tactics. In Appendix A, I show that there is a statistically significant and positive relationship between the number of mass comment campaigns and the proportion of comments submitted by public interest groups. This relationship suggests that mass comment campaigns are used in unison with submitting substantive comments.

⁹Ideally, a public interest group wants to know who is lobbying and what information is conveyed by active lobbyists. Though organized interests tend to know the activities of groups with similar goals, they often know little about their opposition. Issue salience provides a rough proxy to inform an interest about who lobbies and by extension, the competitiveness of the lobbying environment (Hojnacki et al. 2012).

lobbying on an issue also increases, which decreases the likelihood of an interest achieving its policy goal (Lowery 2007; Salisbury 1990). What is more, when the issue is highly salient, agencies are not likely to change their rules due to comments because political actors such as Members of Congress and agency heads may control more rulemaking decisions (Shapiro 2008). Essentially, the decision to lobby is predicated on the expectation on success; in cases of high issue salience, the likelihood of success, and therefore lobbying, decreases. When issue salience is low or moderate, a policy may still be relevant to a narrow sector of the population, such as a public interest group. In such cases, public interest group not only perceives that it has a stake in the rule outcome, but also that it can contribute valuable policy information. Further, a public interest group is more likely to be heard by the agency, because fewer stakeholders actively lobby on the rule. The rulemaking agency is unlikely to receive numerous comments from the general public because potential commenters are unaware of the rules, do not have a vested policy interest in the outcome, or lack the capacity to contribute substantive information.

I expect that public interest groups are more likely to pursue organizational maintenance by sponsoring mass comment campaigns as issue salience increases. High issue salience conduces lobbying that capitalizes on public sentiment, i.e. sponsoring mass comment campaigns. By mobilizing allied public support or dissent for a rule, public interest groups expand the scope of stakeholders who pressure bureaucrats to act in accordance with group preferences. However, mobilization serves a motive latent to the public. Because interest groups rely on their membership and donors for financial and political capital, stakeholder satisfaction enters the calculus when interest groups determine their lobbying strategies (Solberg and Waltenburg 2006). These stakeholders expect a due-collecting interest group to actively lobby the case, especially when the issue is salient and the general public is attentive. What is more, public interest groups may compete for resources by lobbying to attract new members from existing organizations (Solberg and Waltenburg 2006). Public interest groups use the notice and comment period to bolster their public relations by using a mass com-

ment campaign to mobilize their members. To “raise awareness, money, and membership” (Shulman 2009), interest groups encourage their members to contact an agency. Therefore, as issue salience increases, public interest groups should be more likely to maintain their organization by sponsoring mass comment campaigns.

The aforementioned discussion leads to two testable hypotheses. First, I expect that public interest groups are less likely to lobby agencies by submitting substantive comments when the issue of a rule is highly salient. Second, I expect issue salience to also affect the degree to which public interest groups mobilize members to comment on rules. The number of mass comment campaigns that target a rule is likely to increase as the issue of the rule is more salient.

Data

I rely on 35 rules finalized by the EPA between 2005 and 2015. For each rule, the rule-making process began after 2003, the year Regulations.gov was published. With the advent of the website, the public could systematically access rule documents, such as the rule text and data used by an agency, and submit comments. This lower bound on time reduces the variation in public access to a rule and costs to submitting a comment. I also avoided rules in which the rulemaking process began in the first or last year of a president’s term because these rules experience augmented presidential oversight (Bolton et al. 2015).¹⁰ In the first year of a term, presidents may use rulemaking to upend regulations from the prior administration (Amar et al. 2012). Further, agency officials are more responsive to presidential influence than organized interest and public input (?). By excluding certain rules, I focus my analysis to instances when the public and organized interests have relatively equal access to participation in rulemaking and ideologically outlying rules should not confound the results. From this process, I obtained data based on two units of analysis. By analyzing 5356 comments submitted by organized interest, I focus on the behavior of public interest

¹⁰Despite this intention, one rule does not meet this criterion.

groups. Additionally, I observe 35 rules to consider aggregate lobbying behavior by public interest groups.

Importantly, I focus on only the EPA because the EPA is the only agency to systematically document receipt of mass comment campaigns. This documentation is necessary to test when public interest groups lobby for organizational maintenance by sponsoring mass comment campaigns. While other agencies do receive mass comment campaigns, estimating the number of campaigns requires reading of every comment submitted to a rule, and is therefore not feasible.

Lobbying for Policy and Submitting Substantive Comments

By submitting a substantive comment, a commenter indicates its credibility as a policy expert and potentially its willingness to realize its policy preferences by capitalizing on judicial review. I label a comment as substantive if the comment conveys policy information or indicates that the rule would not be upheld by a reviewing court. Specifically, I coded a comment as substantive if it: provided empirical support for the commenter’s argument that criticized an agency’s factual findings; stated that the agency acted in a way contrary to Congressional intent or statutory authority; claimed that the agency did not adequately justify their decision; or claim the proposed rule created inconsistencies with existing rules or programs by any federal agency. Conversely, I label a comment and nonsubstantive if the comment is vague, expresses support or dissent for the rule without providing supporting information, or is not within the scope of the rule.

For example, I coded the Natural Resource Defense Council’s (NRDC’s) comment that the EPA’s “[a]rguments that increasing production allocations will result in net environmental benefits are counterintuitive and unfounded....Additionally, increasing production allocations is not warranted by the Clean Air Act.” was coded as substantive (1). NRDC indicates that the EPA’s conclusions are not supported and rulemaking provisions are not within the scope of the authorizing statute. A comment by the Sierra Club and EarthJustice was also coded

as a substantive comment, as they too claim that EPA’s rule fails to comply with statute and is not supported. Conversely, a different comment by NRDC was not substantive (0), because NRDC agrees with EPA’s proposal and requesting clarification of their assumptions. However, the group is not indicating that the rule is founded on faulty premises.

To test if interest groups lobby for policy change by submitting substantive comments, I use two dependent variables. First, I use a dichotomous variable *Substantive Comment* that measures if a comment is a substantive comment submitted by a public interest group. Second, I count the number of substantive comments for each rule, which I label *# Substantive Comments*.

Lobbying for Organizational Maintenance: Mass Comment Campaigns

I measure public interest groups’ pursuit of organizational maintenance using *# Mass Comment Campaigns*, a count of the number of mass comment campaigns that targeted a rule. The number of mass comment campaigns that target a rule serves as both a dependent variable to determine if interest groups mobilize their members on salient issues and as a control variable to determine if issue salience influences submission of substantive comments.

When *# Mass Comment Campaigns* serves as a dependent variable, I expect issue salience to express a positive relationship with the number of campaigns that target a rule. Because the public is aware of issues related to an agency rule, various public interest groups will capitalize on public attentiveness and mobilize their members via campaigns. Of the 35 rules, 10 were targeted by at least one mass comment campaign. While the mean number of comments by individuals for a targeted rule is 126,575.7, the mean for a rule that was not targeted by a mass comment campaign is 2.52. Thus, there is face validity that mass comment campaigns effectively mobilize individuals.

I also use *# Mass Comment Campaigns* as a control variable. I expect there to be a negative relationship between the number of mass comment campaigns and substantive

comments, because public interest groups mobilize their members via mass comment campaigns to convey the size of their support, rather than their specific policy preferences.

Issue Salience

Gormley Jr (1986) indicates that salient issues attract media attention,¹¹ and Baumgartner et al. (2009) and (Mahoney 2008) measure issue salience based on newspaper coverage of an issue. Thus, to measure issue salience, I count the number of unique newspaper articles from major regional newssources published from the time a rule was proposed until the end of the comment period (Resh 2012).¹²

I also use the number of organized interests that submit a comment on a rule as an alternative measure of salience.¹³ Gormley’s definition of salience relates to a generalist population. However, narrow issues can be salient within a subset of society, i.e. organized interests. In accordance with Yackee (2006), I suggest that as an issue is increasingly salient to relevant organized interests, more organized interests, but not necessarily public interest groups, will lobby on the issue by submitting comments.¹⁴ Figure 2 shows the distribution of issue salience for the 35 rules.

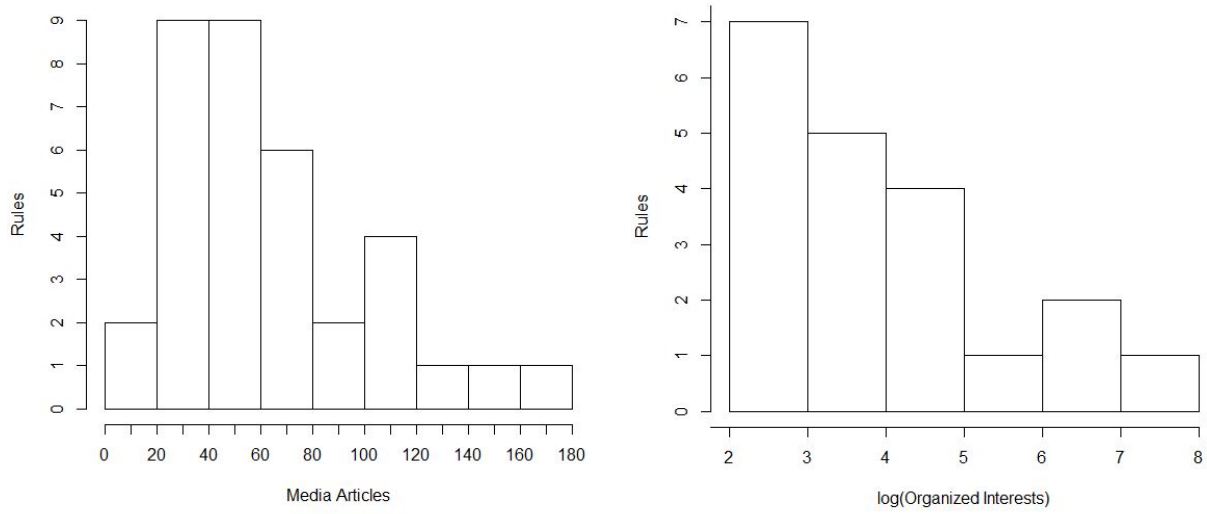
¹¹Some argue that media based measures poorly approximate salience because media coverage is conditioned on journalists ability to comprehend the material they report, i.e. complexity. I argue that this is a non-issue. Though rules, especially those promulgated by the EPA, are technical and require some expertise to faithfully comprehend, rules are written using plain writing so as to not be excessively convoluted and agency staff welcome communication with the public to clarify and explain proposed rules.

¹²(Resh 2012) counts articles published only during the notice and comment period. Because a proposed rule is publicly available when it is published, I argue that media articles from rule proposal until the end of a comment period is a valid time period for collection of this measure.

¹³In Appendix A, I provide a Poisson regression that indicates a statistically significant positive relationship between issue salience and the number of organized interests that lobby on a rule.

¹⁴Notice that this measure of salience may be endogenous to submitting substantive comments. Organized interests, particularly business and industry interests, are affected by a rule to the extent that submitting a comment is rational. Therefore, organized interests may lobby more intensely by submitting substantive comments. Further, when organized interest compete for various policy goals, counter lobbying may inflate the number of comments submitted.

Figure 1: Distribution of Issue Salience by Rule



The left plot shows the distribution of issue salience by rule, measured as the number of unique major regional newspapers articles related to an issue addressed by a rule published between rule proposal and closing of the comment period. The right plot is the distribution of issue salience by rule based on the logged number of organized interests that submit a comment on a rule. The number of organized interest that lobbied on a rule ranges from zero to 1459.

Additional Controls

I control for rule level characteristics that may influence a public interest group’s anticipated success, and therefore lobbying tactic, when lobbying an agency. *# Meetings* is a count of the number of meetings between the EPA and stakeholders with respect to the rule. Though these meetings are often with individual stakeholders, the meetings can also include public outreach meetings. Because agencies proactively address stakeholders’ concerns with a rule, explain the impact of a rule, and create public “buy-in”, this variable should be negatively correlated with substantive comments.

Comments Solicited is a dichotomous variable indicating if the EPA published a notice asking the feedback on specific aspects of a rule. When seeking input on their proposed rule, the agency directs commenters to address certain substance of the rule rather than the agency’s procedural compliance. By soliciting comments, organized interests are more likely to comment on the rule substance and agencies are more likely to change rule content with respect to this sought information.

Complexity measure the readability of the proposed rule’s summary (Potter 2019). Because complex rules are difficult for non-policy experts to comprehend, journalists may not report on complex issues. Further, public interest groups may struggle to inspire members to comment on a complex rule, as the core of the rule cannot be distilled to a concise, activating message. Therefore, I expect rule complexity to be negatively correlated with public interest groups’ organizational maintenance goals.

Finalizing Administration indicates the presidential administration under which the rule was finalized, which should reflect the ideology of the rule. When this variable equals 1, the rule was finalized under the Obama administration and when it equals 0, the Bush administration. In addition to ideology, the finalizing administration proxies public interest groups’ expectation of achieving their goal. The Bush administration prioritized business interests over public interest group participation and generally acted preferentially towards big business interests with respect to environmental regulation (Kamieniecki 2006). Conversely, the EPA under the Obama administration invested in outreach to broader regulated parties during the rulemaking process. Thus, I control for these stylistic differences. Appendix C provides descriptive statistics for the independent variables.

Method

My analysis occurs in two parts to address the goals of public interest groups. First, I test the hypothesis that a public interest group is less likely to submit a substantive comment when issue salience is high. I use logistic regression for rare events on the 5356 comments submitted by organized interests where the dependent variable indicates whether a comment is a substantive comment submitted by a public interest group. A standard logistic regression underestimates the occurrence of rare events and is likely to produce bias estimates (King and Zeng 2001). Because only 36 comments, or 0.6 percent of comments, were substantive comments submitted by a public interest group, a correction for rare events will yield less

biased estimates. I also use a negative binomial regression to determine if a rule receives more substantive comments by public interest groups when issue salience is high. The dependent variable is the number of substantive comments submitted to a rule for the 35 rules. I use a negative binomial regression because the mean number of substantive comments is greater than the variance. Thus, the dependent variable is overdispersed, requiring using of a negative binomial regression.

Next, I test the hypothesis that as issue salience increases public interest groups lobby for organizational maintenance by sponsoring mass comment campaigns. I use a negative binomial regression where the dependent variable is the number of mass comment campaigns that targeted a rule. Again, the dependent variable is overdispersed. Further, of the 35 rules, 25 rules were not targeted by campaigns; zeros occur often in the dependent variable. This pattern typically warrant use of a zero-inflated model. However, a Vuong's likelihood ratio test indicates that a negative binomial regression is not distinguishable from a zero-inflated negative binomial regression where all regressions are used in both equations of the zero-inflated model.

Results

First, I analyze my hypothesis that public interest groups are less likely to lobby for policy by submitting substantive comments during the notice and comment period when issue salience is high. I use two dependent variables to measure policy lobbying. *Substantive Comment* is a dichotomous variable indicating if a comment was substantive and submitted by a public interest group. *# Substantive Comments* is a count of the substantive comments submitted by public interest groups to a rule. I measure issue salience using two dichotomous variables. When *Media Articles* equals 1, at least 100 media articles reported on issues related to the rule. When *Lobbying Organizations* equals 1, at least 50 organized interests lobbied on a rule.

When issue salience is measured based on the number of organizations that lobbied on a rule, I find that a public interest group is less likely to submit a substantive comment as more organized interests lobby. In the second column, the model indicates a negative and statistically significant relationship between issue salience and the likelihood of a public interest group submitting a substantive comment. Further, the effect is substantively meaningful. Holding all other variables constant, a public interest group is 72.5 percent less likely to submit a substantive comment on a rule where at least 50 organized interests lobbied. Because public interest groups compose a minority of lobbying organized interests for each rule, it is likely that additional groups represent business interests as the number of organized interests increases. Therefore, when more organized interests lobby, any given comment is less likely to be submitted by a public interest group. Further, this result is consistent with Lowery’s (2007) claim that an organization’s decision to lobby depends, in part, on which other organized interests also lobby on an issue. As more organizations lobby an agency on a rule, a public interest group’s expected success at influencing policy decreases. As such, a public interest group may either invests less effort in crafting a comment that effectively challenges rulemaking or opts out of lobbying altogether.

When using media articles to predict if a substantive comment was submitted by a public interest group, I do not find evidence that public interest groups are less likely to lobby for policy when issue salience is high, regardless of the dependent variable. The first and third columns of Table 1 indicate that *Media Articles* is not statistically significant. When at least 100 newspaper articles are published on an issue related to a rule or at least 50 organized interests lobby a rule, public interest groups are not more likely to submit a substantive comment to influence agency policy. I find similar results when the number of substantive comments is predicted using the number of organized interests that lobby on a rule. In the fourth column, *Lobbying Organizations* is not statistically significant. Instead, the total number of comments submitted correlates with the number of substantive comments.

Because variables related to rule characteristics are not related to public interest group

lobbying behavior, it is possible that public interest groups base their lobbying decisions on intra-organizational determinants. The public interest groups that submitted comments are generally older groups. The Sierra Club, Natural Resource Defense Council, and Environmental Defense Fund have much experience lobbying multiple venues in the political process, and have in-house legal counsel. Conversely, younger and less established public interest groups were generally absent. This may imply that public interest groups that submit comments surpass a certain resource threshold and base their lobbying on established knowledge of the policy environment, rather than issue salience.

Next, I analyze my hypothesis that public interest groups lobby to support organizational maintenance as issue salience increases. The dependent variable *# Mass Comment Campaigns* indicates the number of mass comment campaigns that targeted a rule. The two models correspond with the two measures of issue salience: *Media Articles* and *Lobbying Organizations*. Both models suggest a relationship between issue salience and public interest group lobbying for organizational maintenance. As measured by media attention, when at least 100 newspapers articles reported on an issue related to a rule, a rule received approximately 4.358 more mass comment campaigns, all else equal. Similarly, when at least 50 organized interests lobbied a rule, the rule receives about 17.219 more mass comment campaigns. Additionally, *Complexity* is statistically significant and negatively signed. Rules that are more difficult to comprehend receive fewer mass comment campaigns. This is consistent with reports from public interest groups that indicate that to mobilize individuals, campaigns should use inspiring messages and make simple requests (Balla et al. 2019). When rule content is technical, it is difficult to distill the information into a concise and motivating message.

Table 1: Public Interest Group Lobbying for Policy based on Issue Salience

	<i>Dependent variable:</i>			
	Substantive Comment		# Substantive Comments	
Issue Salience				
Media Articles	-0.429 (1.298)		0.013 (0.547)	
Lobbying Organizations		-1.290* (0.580)		0.244 (0.611)
# Mass Comment Campaigns	-0.028 (0.023)	-0.023 (0.022)	-0.093* (0.039)	-0.085* (0.031)
# Meetings	0.006 (0.020)	0.008 (0.015)	0.007 (0.008)	0.005 (0.540)
Comments Solicited	1.286 (1.033)	0.586 (0.562)	0.532 (0.441)	0.530 (0.234)
Complexity	-0.157 (0.246)	-0.068 (0.157)	-0.062 (0.108)	-0.076 (0.458)
Finalizing Administration	-0.029 (1.092)	-0.297 (0.812)	0.448 (0.490)	0.491 (0.325)
# Total Comments			0.003** (0.001)	0.002* (0.001)
Constant	0.306 (4.806)	0.233 (2.653)	0.256 (1.718)	0.407 (0.800)
Observations	5356	5356	35	35
McFadden's R ²	0.066	0.087	0.270	0.275

*p<0.05; **p<0.01

Note: The first two columns provide results for a logistic regression for rare events using news articles and the number of organized interests lobbying the EPA. Seventy one of the comment were substantive comments submitted by public interest groups. Further, 11 of the 35 rules did not receive a substantive comment from a public interest group. The third and fourth column use negative binomial regressions with the same issue salience variables.

Table 2: Public Interest Group Lobbying for Organizational Maintenance based on Issue Salience

	<i>Dependent variable:</i>	
	# Mass Comment Campaigns	# Mass Comment Campaigns
Issue Salience		
Media Articles	1.472* (0.637)	
Lobbying Organizations		2.846** (0.864)
# Substantive Comments	-0.575* (0.104)	-0.516* (0.259)
# Meetings	0.007* (0.268)	0.003 (0.008)
Comments Solicited	0.677 (0.594)	2.007 (1.102)
Complexity	-0.392* (0.149)	-0.660* (0.259)
Finalizing Administration	2.112 (1.150)	2.904* (1.479)
Constant	5.852 (2.329)	7.415 (3.145)
Observations	35	35
McFadden's R ²	0.320	0.587

*p<0.05; **p<0.01

Note: Table 2 provides results for negative binomial regressions that assess if public interest groups are more likely to pursue organizational maintenance when issue salience increases. The results are robust to count measures of issue salience.

The inconsistent results based on the measurement of issue salience suggest that certain constructs of issue salience are more valid with respect to certain public interest group goals. While media based measures of salience capture attention by the general public, issue salience measured by the number of lobbying organized interests considers a more constrained scope. The varying conceptualization of issue salience are apparent from the results. Both issue salience measures exhibited a relationship with the number of mass comment campaigns that targeted a rule. In this context, public interest groups want to capitalize on public attentiveness and attention from a subset of activists, i.e. other organized interests. However, issue salience measures are generally not correlated with public interest group lobbying to change policy. When lobbying for policy goals, public interest groups may not be concerned with public opinion. Instead, groups may benefit from a constrained issue salience scope mitigate involvement from other influences and to control the framing of policy issues. The inconsistencies suggest that questions of issue salience should not only consider magnitude, but also audience. Scholars should ask, salient *to whom*?

Finally, the results imply that certain rules better serve certain public interest group goals. In the third and fourth column of Table 1, *# Mass Comment Campaigns* is statistically significant and negatively signed. Rules that are targeted to promote organizational maintenance are less likely to be lobbied by public interest group for policy purposes. Further, in Table 2, *# Substantive Comments* is statistically significant and negatively signed. Rules that receive more substantive comments by public interest groups are less likely to be targeted by mass comment campaigns. Therefore, there is consistent evidence that public interest groups prioritize either policy or organizational maintenance goals when determining lobbying strategies.

Conclusion

I attempt to understand how public interest group goals determine regulatory lobbying tactics by observing groups' commenting behavior on 35 EPA rules. To identify patterns in how goal pursuit manifests in lobbying behavior, I consider the salience of issues. Specifically, I argue that when public interest groups pursue policy goals, a group is less likely to submit a substantive comment and more likely to sponsor mass comment campaigns when issue salience is high. I find partial support for my first hypothesis; when at least 100 organized interests lobby on a rule, a public interest group is less likely to submit a substantive comment. I find consistent support for the hypothesis that high issue salience promotes lobbying for organizational maintenance. My findings not only support the argument that public interest groups are concerned with both policy influence and organizational survival when determining lobbying strategies, but also that public interest groups recognize that certain agency rules better serve each goal.

In the words of Solberg and Waltenburg (2006), "explanations of group advocacy omitting [policy and organizational maintenance] concerns are inherently flawed." My study provides some validity to the claim by simultaneously considering both factors that impact a public interest group's lobbying behavior during the notice and comment period using an original dataset on EPA rules. Importantly, I also demonstrate how these goals can be observationally inferred from lobbying behavior. My findings speak to normative concerns about potential undue influence of certain organized interests— business and industry organizations— in notice and comment rulemaking. If public interest groups do not intend to influence policy, either by choosing to not lobby due to low expectations of success or by knowingly employing tactics that do not address policy, then public interest groups should not, in fact, impact rule substance.

A variety of questions remain open with respect to organized interest and public interest group lobbying in a bureaucratic setting. Though unexamined in this study, understanding the missions of individual public interest groups provides some context to their lobbying

strategies. Compare the Environmental Defense Fund to the Center for Biological Diversity, which submitted 15 and two comments respectively. While both regularly litigate federal agencies, the Environmental Defense Fund focuses on issues such as global warming and ecosystem restoration, whereas the Center for Biological Diversity pursues issue related to endangered species. To champion these issues, the former group engages in research and promotes public-private partnerships to protect the environment. Conversely, the Center for Biological Diversity primarily relies on legal tactics. Similarly, juxtapose the Sierra Club and its legal branch Earthjustice to Friends of the Earth. While the Sierra Club and Earthjustice authored or coauthored 25 of the 71 comments by public interest groups, Friends of the Earth was party to one comment. The founder of Sierra Club left the organization to create Friends of the Earth due to intra-organizational disagreements about campaign tactics and targets. Though both organizations are major forces within the environmental advocacy community, the groups are uniquely motivated. To consider public interest groups similar in their lobbying strategies may be flawed. Were groups comparable on their issues, tactics, and membership benefits, multiple groups would not be justified. Instead, a single group would occupy the niche. To appeal to a unique membership, environmental groups must differ and may differ in their lobbying strategies. By omitting such consideration from the analysis, public interest groups are assumed to behave similarly, which may not be a founded premise.

In my study, I focus on the EPA. However, this agency is anomalous. While the volume of organized interests vastly expanded in the 1990s, many environmental organizations were founded in the 1960s and 1970s, and therefore have ample experience and resources. Public interest groups focusing on other issues may not be as established, politically savvy, and therefore comparable to environmental groups. Thus, future research can expand by examining other federal agencies and policy issues to account for variation in the organized interest community. Initial efforts may target agencies within the Department of the Interior, such as the Bureau of Land Management, National Parks Service, and the US Fish and Wildlife

Service due to the environmental issue similarities with the EPA. Additionally, researchers can test if public interest groups pursue multiple goals when lobbying agencies that do not address environmental issues, such as the Occupational Safety and Health Administration and the Food and Drug Administration. Ultimately, there are ample avenues to uncover refined understandings of public interest group lobbying strategies.

References

- Amar, A. R., Andreen, W. L., Beermann, J. M., Elliott, H., Geltzer, J. A., Gray, D., Horwitz, P., Joyner, D. H., Mendelson, N., Render, M. M., et al. (2012). *Transitions: Legal Change, Legal Meanings*. University of Alabama Press.
- Balla, S. J., Beck, A. R., Cubbison, W. C., and Prasad, A. (2019). Where’s the spam? interest groups and mass comment campaigns in agency rulemaking. *Policy & Internet*.
- Baumgartner, F. R., Berry, J. M., Hojnacki, M., Leech, B. L., and Kimball, D. C. (2009). *Lobbying and policy change: Who wins, who loses, and why*. University of Chicago Press.
- Bolton, A., Potter, R. A., and Thrower, S. (2015). Organizational capacity, regulatory review, and the limits of political control. *The Journal of Law, Economics, and Organization*, 32(2):242–271.
- Caldeira, G. A., Hojnacki, M., and Wright, J. R. (2000). The lobbying activities of organized interests in federal judicial nominations. *Journal of Politics*, 62(1):51–69.
- Garvey, T. (2017). A brief overview of rulemaking and judicial review.
- Gordon, S. C. and Hafer, C. (2005). Flexing muscle: Corporate political expenditures as signals to the bureaucracy. *American Political Science Review*, 99(2):245–261.
- Gormley Jr, W. T. (1986). Regulatory issue networks in a federal system. *Polity*, 18(4):595–620.
- Haeder, S. F. and Yackee, S. W. (2015). Influence and the administrative process: Lobbying the us president’s office of management and budget. *American Political Science Review*, 109(3):507–522.
- Hojnacki, M., Kimball, D. C., Baumgartner, F. R., Berry, J. M., and Leech, B. L. (2012). Studying organizational advocacy and influence: Reexamining interest group research. *Annual Review of Political Science*, 15:379–399.
- Kamieniecki, S. (2006). *Corporate America and environmental policy: How often does business get its way?* Stanford University Press.
- Karpf, D. (2010). Online political mobilization from the advocacy group’s perspective: Looking beyond clicktivism. *Policy & Internet*, 2(4):7–41.
- King, G. and Zeng, L. (2001). Logistic regression in rare events data. *Political analysis*, 9(2):137–163.
- Lowery, D. (2007). Why do organized interests lobby? a multi-goal, multi-context theory of lobbying. *Polity*, 39(1):29–54.
- Lowery, D. (2013). Lobbying influence: Meaning, measurement and missing. *Interest Groups & Advocacy*, 2(1):1–26.

- Mahoney, C. (2008). *Brussels versus the Beltway. Advocacy in the United States and the European Union*. Georgetown University Press.
- McKay, A. and Yackee, S. W. (2007). Interest group competition on federal agency rules. *American Politics Research*, 35(3):336–357.
- Potter, R. A. (2017). Slow-rolling, fast-tracking, and the pace of bureaucratic decisions in rulemaking. *The Journal of Politics*, 79(3):841–855.
- Potter, R. A. (2019). *Bending the Rules: Procedural Politicking in the Bureaucracy*. University of Chicago Press.
- Potter, R. A. and Richardson, M. (2016). Vox populi? agenc rulemaking and the politics of mass comment campaigns. Southern Political Science Association.
- Resh, W. G. (2012). Who participates now... and why?: A case study of modern interest participation and bureaucratic decision-making in the age of e-government. In *E-Governance and Civic Engagement: Factors and Determinants of E-Democracy*, pages 315–337. IGI Global.
- Salisbury, R. H. (1990). *The paradox of interest groups in Washington—More groups, less clout*. Springer.
- Shapiro, S. (2008). Does the amount of participation matter? public comments, agency responses and the time to finalize a regulation. *Policy Sciences*, 41(1):33–49.
- Shulman, S. W. (2009). The case against mass e-mails: Perverse incentives and low quality public participation in us federal rulemaking. *Policy & Internet*, 1(1):23–53.
- Solberg, R. S. and Waltenburg, E. N. (2006). Why do interest groups engage the judiciary? policy wishes and structural needs. *Social Science Quarterly*, 87(3):558–572.
- Yackee, S. W. (2006). Assessing inter-institutional attention to and influence on government regulations. *British Journal of Political Science*, 36(4):723–744.
- Yackee, S. W. (2014). Participant voice in the bureaucratic policymaking process. *Journal of Public Administration Research and Theory*, 25(2):427–449.

Appendix A: Predictors of Public Interest Group Lobbying

Mass Comment Campaign Sponsorship and Public Interest Group Lobbying

Solberg and Waltenburg (2006) argue that organizations employ maintenance strategies in low visibility venues, such as courts or agencies, in addition to other policy lobbying tactics. In Appendix A, I show that there is a statistically significant and positive relationship between the number of mass comment campaigns and the proportion of comments submitted by public interest groups. This relationship suggests that mass comment campaigns are used in unison with submitting substantive comments.

Table 3: Mass Comment Campaign Sponsorship is Correlated with Public Interest Group Policy Lobbying

	<i>Dependent variable:</i>
	Proportion Substantive Comments
articles	0.005 (0.005)
# Mass Comment Campaigns	0.054*** (0.010)
# Meetings	-0.017** (0.008)
Previous Litigation	-0.033 (0.359)
Request for Comments	0.712** (0.358)
Finalizing Administration	-0.508
Constant	-4.536*** (0.588)
Observations	35
R ²	0.188
<i>Note:</i> *p<0.1; **p<0.05; ***p<0.01	

Issue Salience and Public Interest Group Lobbying

My argument that public interest groups are less likely to lobby for policy goals when issue salience is high is based on the assumption that when issue salience is high, more organized interests lobby on a rule. Because more organized interests lobby, a public interest group is less likely to achieve its policy goals. Therefore, a public interest group is less likely to lobby because the expected probability of achieving policy preferences is low. Table

4 indicates a statistically significant positive relationship between issue salience and the number of organized interests that lobbied on a rule.

Table 4: Issue Salience Predicts Lobbying

	<i>Dependent variable:</i>
	# Organized Interests
Media Articles	0.010*** (0.0003)
Constant	4.321*** (0.028)
Observations	35

***p<0.01

Appendix B: Data and Data Collection

Comments

For each rule, I collected the publicly available comments. I retrieved comments from both Regulations.gov and ProQuest’s Regulatory Insights. When commenters submit text to Regulations.gov, the Application Programming Interface (API) for Regulation.gov easily allows one to download the comment as a string of text. However, many comments are submitted as PDF or Word files, which are not easily collected through the API. Therefore, I used Selenium to download comments that were submitted as a file from Regulatory Insights. Each comment receives a unique submission identification that allows me to match comments and their relevant information across websites. In addition to the comments, EPA provides the name of the commenter and, if applicable, the organization with which the individual is associated. Using this information, I identified comments submitted by public interest groups. For example, the submission *epa-hq-oar-2002-0030-0097* gives the name “Mark MacLeod Director Special Projects, Environmental Defense”. For all entries, the organization is listed after the name and a comma, allowing me to retrieve the organization by splitting the string on the comma. I remove comments by organizations with the words or stem “industry,” “corporat,” “inc,” “llc,” “assoc,” “manufacture,” and “department” to remove businesses, industry interests, corporations, trade associations, and governments. I preserved organizations such as the Resources Defense Fund, Sierra Club, the Wildlife Federation, EarthJustice, and similar groups. Finally, I hand coded the remaining comments to identify the submitting organization. This process resulted in 71 unique comments¹⁵ submitted by public interest groups. Of these 71 comments, 36 were substantive.

Mass Comment Campaigns

When the EPA receives comments in association with a mass comment campaign, a single, representative comment and the total number of comments received from that campaign are published. For all the rules, about 1.45 million comments were received. Less than 40,000 comments were unique, indicating that mass comment campaigns were responsible for the majority of comments. For example, a rule regulating work standard for agricultural workers exposed to pesticides¹⁶ received nearly 400,000 comments, but approximately 390,000 were a result of mass comment campaigns. I retrieved mass comment campaigns for each rule using the API for Regulations.gov.¹⁷ For each rule, I search for document subtype “Mass Campaign.” Though most campaigns identify the sponsoring organized interest, some campaigns do not identify their sponsor. Therefore, I can only measure the number of campaigns that target a rule, rather than measure is a specific organization sponsored a mass comment campaign.

¹⁵Initially, I identified 84 comments by public interest groups. However, some comments were so large that the comment was submitted in parts. Additionally, one public interest group submit the same comment four times with various technical corrections. Because the versions essentially conveyed the same information, I counted these four submissions as a single comment.

¹⁶80 FR 67495

¹⁷The EPA is the only agency, to my knowledge, that documents mass comment campaigns.

Issue Salience

For each rule, I search keywords taken from ProQuest's Regulatory Insights in LexisNexis. I search the docket number in Regulatory Insights. Then, I select the proposed rule and search the subject terms. Specifically, I separate the subject terms using "OR" and also use "EPA" as a search term. For example, Regulatory Insights lists "Pollution control; Licenses; State government" for the rule associated with the docket EPA-HQ-OAR-2003-0179. In LexisNexis, I search "(pollution control OR licenses OR state government) AND EPA".

Appendix C: Descriptive Statistics

Table 5: Summary Statistics of Count and Continuous Variables

Variable	Min	Median	Mean	Max
Substantive Comments	0.00	1.00	1.03	4.00
Mass Comment Campaigns	0.00	0.00	6.91	81.00
Meetings	0.00	3.00	13.2	117.00
Complexity	12.02	16.20	16.44	20.09

Table 6: Summary Statistics of Dichotomous Variables

	0	1
Comments Solicited	15	20
Finalizing Administration (1=Obama)	7	28