

Making Policy About Distributive Justice

The Environmental Justice Movement's Impact on Agency Rulemaking

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Papers, slides, & data: judgelord.github.io

The Broader Project: Public Pressure

Mobilization



Getting policymakers' attention and framing policy debates



Substantive policy influence



Surviving judicial review

90%

If groups successfully push Congress to pass the Green New Deal, what happens when 30+ agencies write the actual policies?

If groups successfully push Congress to pass the
~~Green New Deal~~

Build Back Better Act, what happens when 30+
agencies write the actual policies?

If groups successfully push Congress to pass the
~~Green New Deal~~

~~Build Back Better Act~~

Inflation Reduction Act, what happens when 33 agencies write the actual policies?

Does public pressure affect bureaucratic policymaking? If so, by what mechanisms?

Preview: The Impact of Environmental Justice Advocacy

- Theory: Public pressure informs bureaucrats
- Data: Change in 13,000 draft and final rule pairs $\Leftarrow\Rightarrow$ 40 million public comments
- Methods: Hand-coding $\Leftarrow\Rightarrow$ computational text analysis
- Findings
 - Policy rarely addresses environmental justice
 - When groups raise concerns, policy texts change
 - \uparrow pressure $\rightsquigarrow\uparrow$ change
 - Responsiveness varies with institutional structure
 - Policymakers are more responsive to national advocacy organizations

U.S. federal agencies rarely address environmental justice but are more likely to when pressured.

1990 Clean Air Act:
EPA shall regulate as
“appropriate and
necessary” for public
health



Safe Levels of Mercury (For Whom?)

2004 Draft Rule: “the U.S. population”



170,000 public comments



2005 Final Rule: Environmental justice
for “minority populations”



Alaska Community Action On Toxics members advocating in DC.



The Environmental Justice Frame

"Environmental justice" is a distinct phrase (few false positives) without many synonyms (few false negatives)

Why this matters:

- "Environmental" policy debates are rarely about *distributions* of costs and benefits
- Reframing policy in distributive justice terms can shape normative, political, and economic analysis.

He who determines what politics is about runs the country because the definition of conflicts allocates power.

- E.E. Schattschneider

Do Movements Shape Policy?

Yes. (Dahl 1956; Lipsky 1968; Piven & Cloward 1977; Tarrow 1994; Andrews 1997; McAdam 1982, 2001; McAdam & Su 2002, McCammon et al. 2011; Cress & Snow 2000; Weldon 2002)

- Petitioning government builds movements and policy agendas (Carpenter 2021)
- Protests inform policymakers and policy agendas (Gillion 2013, Gause 2022, Wasow 2020)
- Movements advance issue frames (Jones & Baumgartner 1991, Woodly 2015)
- No movement, no policy (Lowi 1972, Skocpol 2013)

Does public pressure affect *bureaucratic policymaking*? If so, by what mechanisms?

Scholars of bureaucracy focus on *technical* information

Does *political* information matter?

- Frames about who is affected? (Schneider & Ingram 1993)
- Coalition size? (Dwidar 2021, Nelson & Yackee 2012)
- Public attention?

Scholars of bureaucracy focus on *technical* information

Does *political* information matter?

- H_1 : Agencies address distributive justice when groups raise concerns
- H_2 : Agencies that more frequently address distributive justice are more responsive
- H_3 : \uparrow Coalition size (number of groups) \rightsquigarrow \uparrow Policy response
- H_4 : \uparrow Public attention (number of comments) \rightsquigarrow \uparrow Policy response

Data

*All 13,179 draft and final rule pairs from 40 agencies,
1993-2020*

~40,000,000 public comments on these draft rules

~4,800,000 comments raise environmental justice concerns

Methods

Hand coding \iff computational text analysis

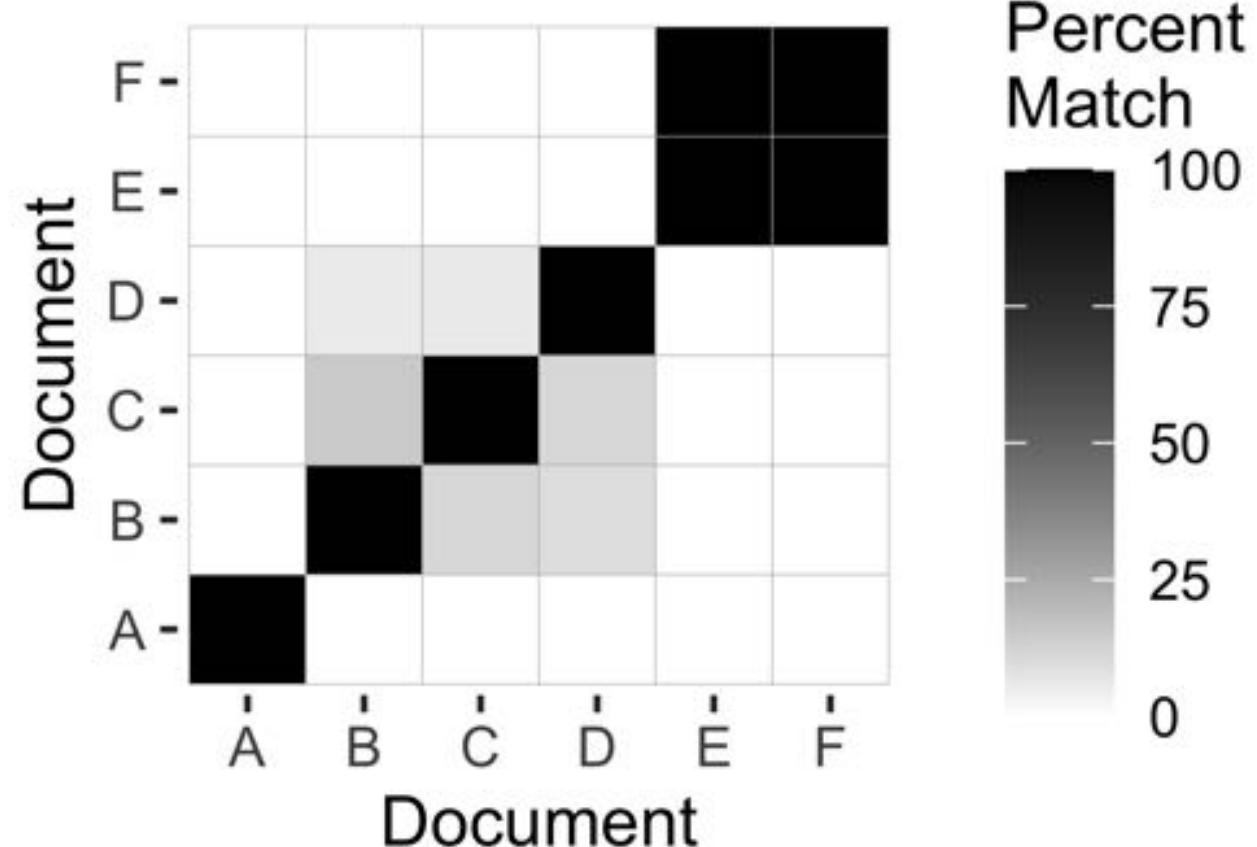
Identify coalitions with text reuse

"...jobs and our economy. I am also concerned that your proposal allows power plants to buy and sell mercury pollution credits. This would permit some plants to continue to harm..."

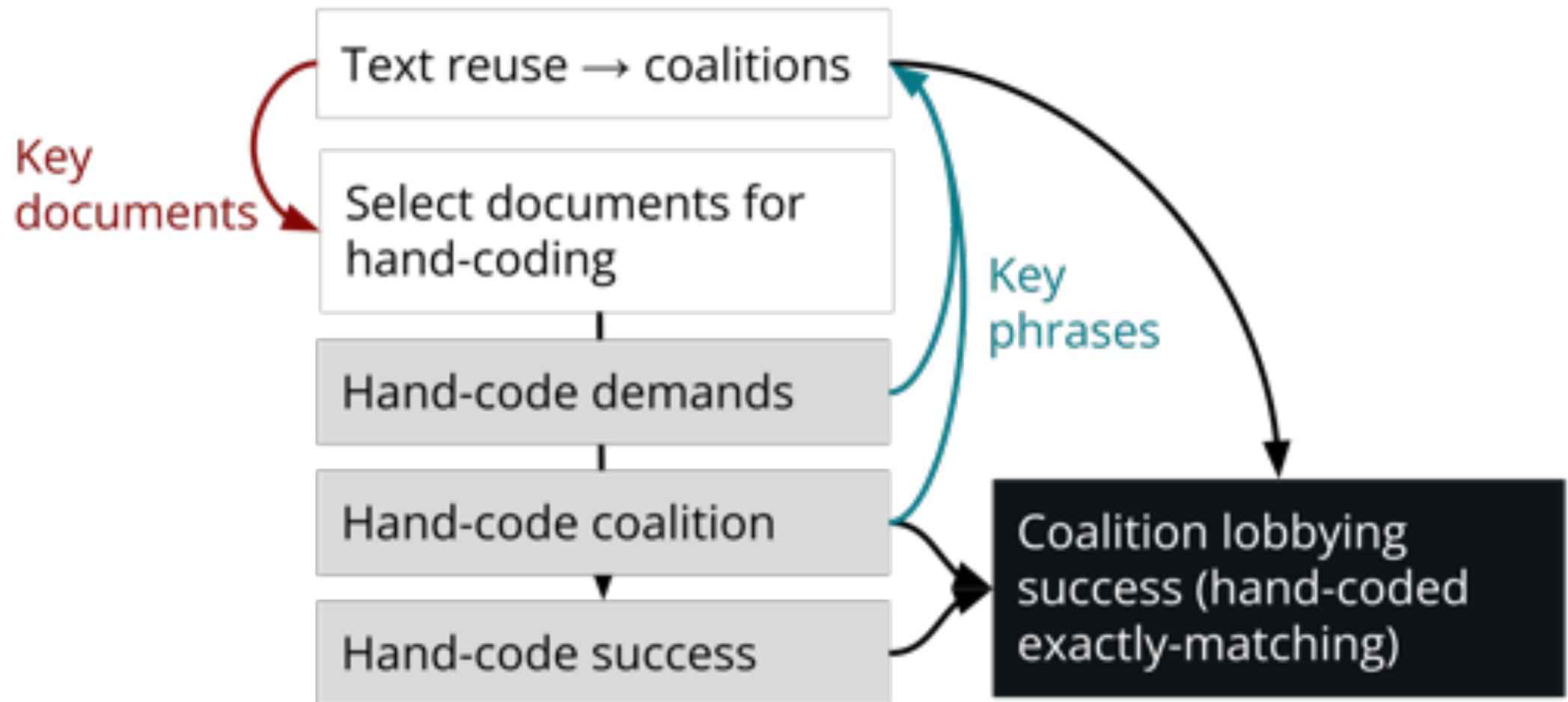
"...pollutants like dioxin. I am also concerned that your proposal allows power plants to buy and sell mercury pollution credits. This kind of market-based mechanism to reduce ..."

Identify coalitions with text reuse

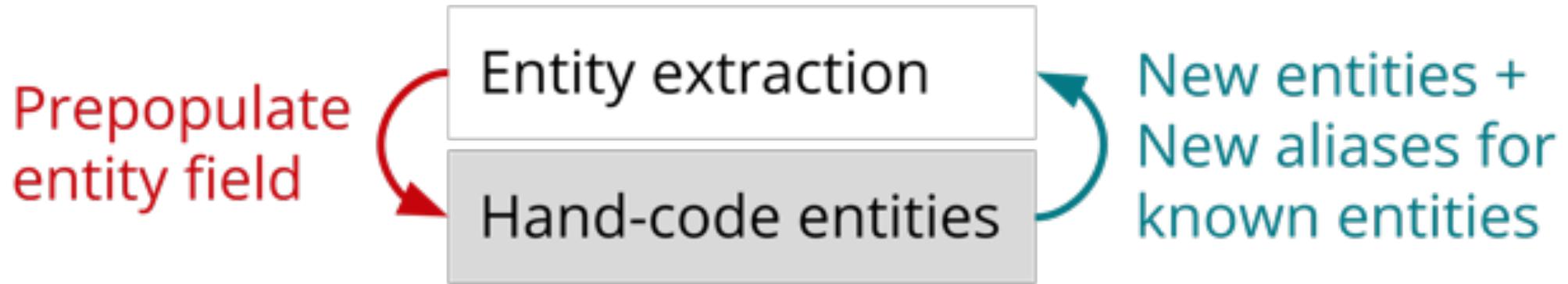
- Document A is unique
- B, C, and D share text
- E and F are the same text



Iteratively group commenters into coalitions



Iteratively link comments to organizations



Measuring influence

I. Getting policymakers' attention/engagement/response

- Adding policy language (All 11,315 rules)
- Changing policy language (All 1,864 rules)

II. Getting substantive policy demands

- Lobbying success for all commenters on 150 rules (random sample)
 - 10,894 hand-coded comments

Modeling the probability of policy change

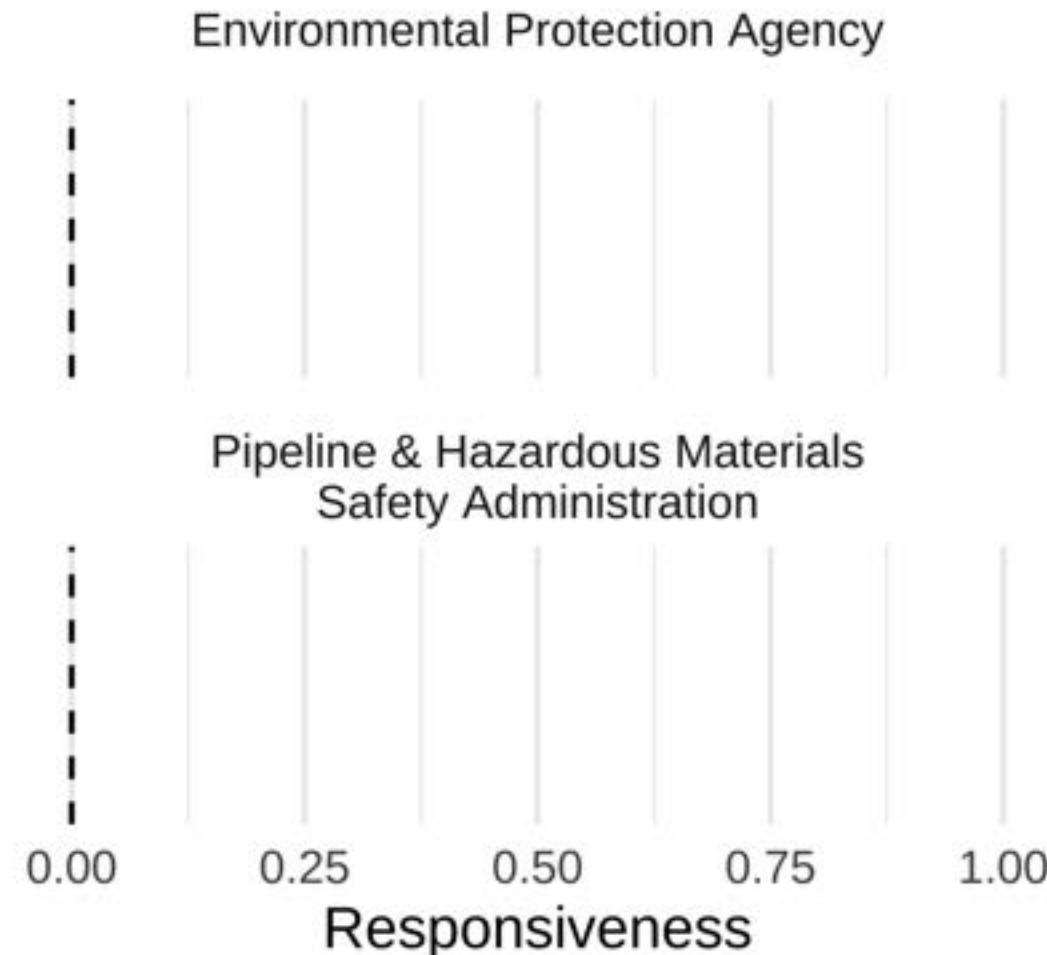
(1) Variation across agencies:

$\text{Pr}(\text{Policy Change} \mid \text{President}) \sim \text{Policy Demands} + \text{Coalition Size} + \text{Public Attention} + \text{Prior Rate} (+ \text{Interactions})$

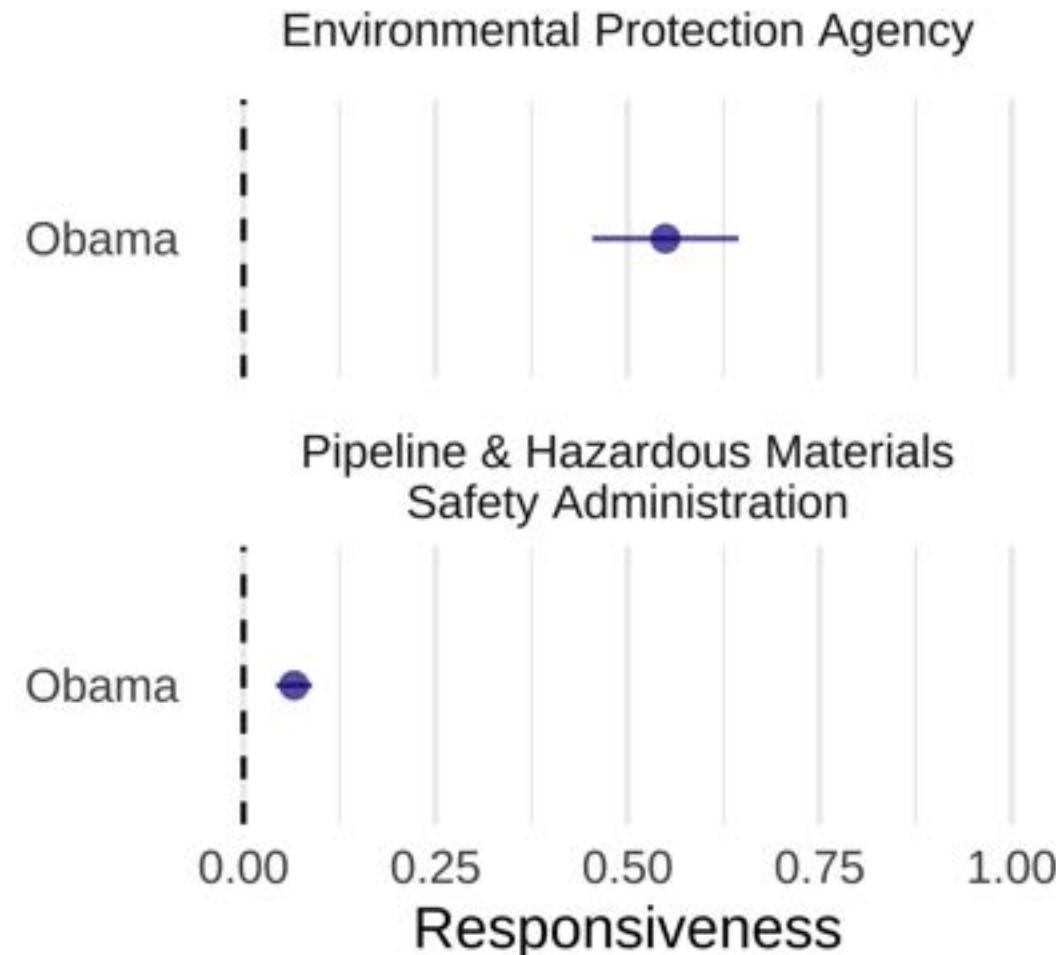
(2) Variation within agencies:

$\text{Pr}(\text{Policy Change} \mid \text{President} + \text{Agency}) \sim \text{Policy Demands} + \text{Coalition Size} + \text{Public Attention} (+ \text{Interactions})$

H_1 Agencies
respond to
environmental
justice concerns

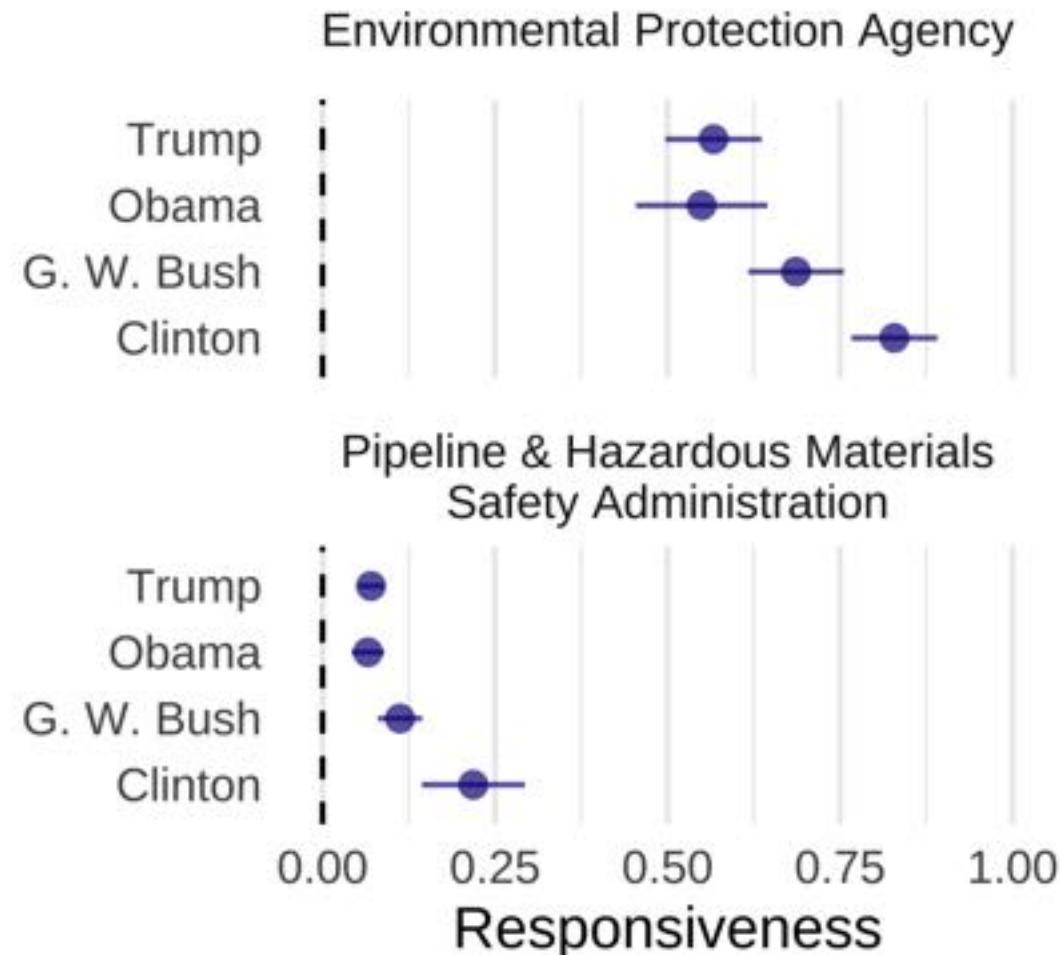


✓ H_1 Agencies respond to environmental justice concerns



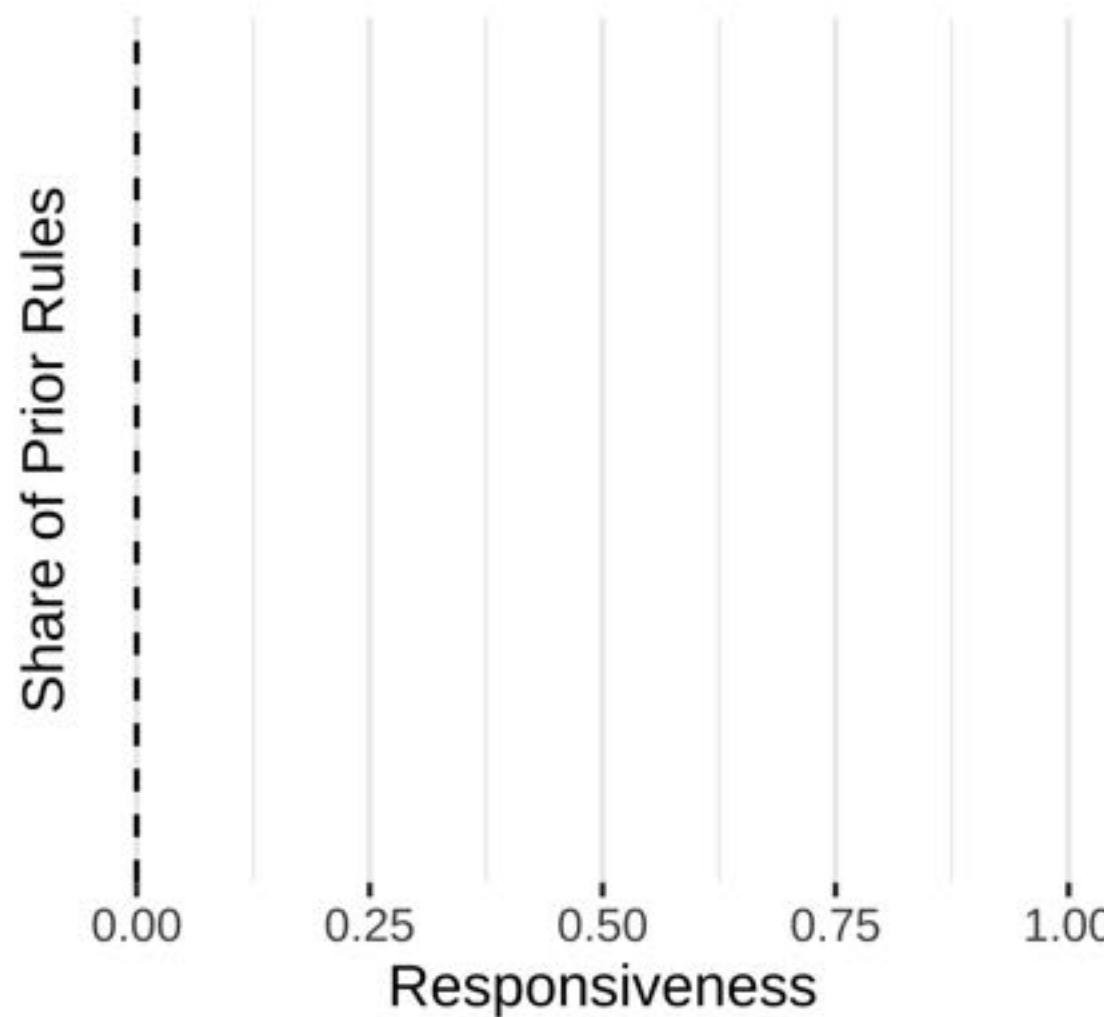
[TABLE]

✓ H_1 Agencies respond to environmental justice concerns

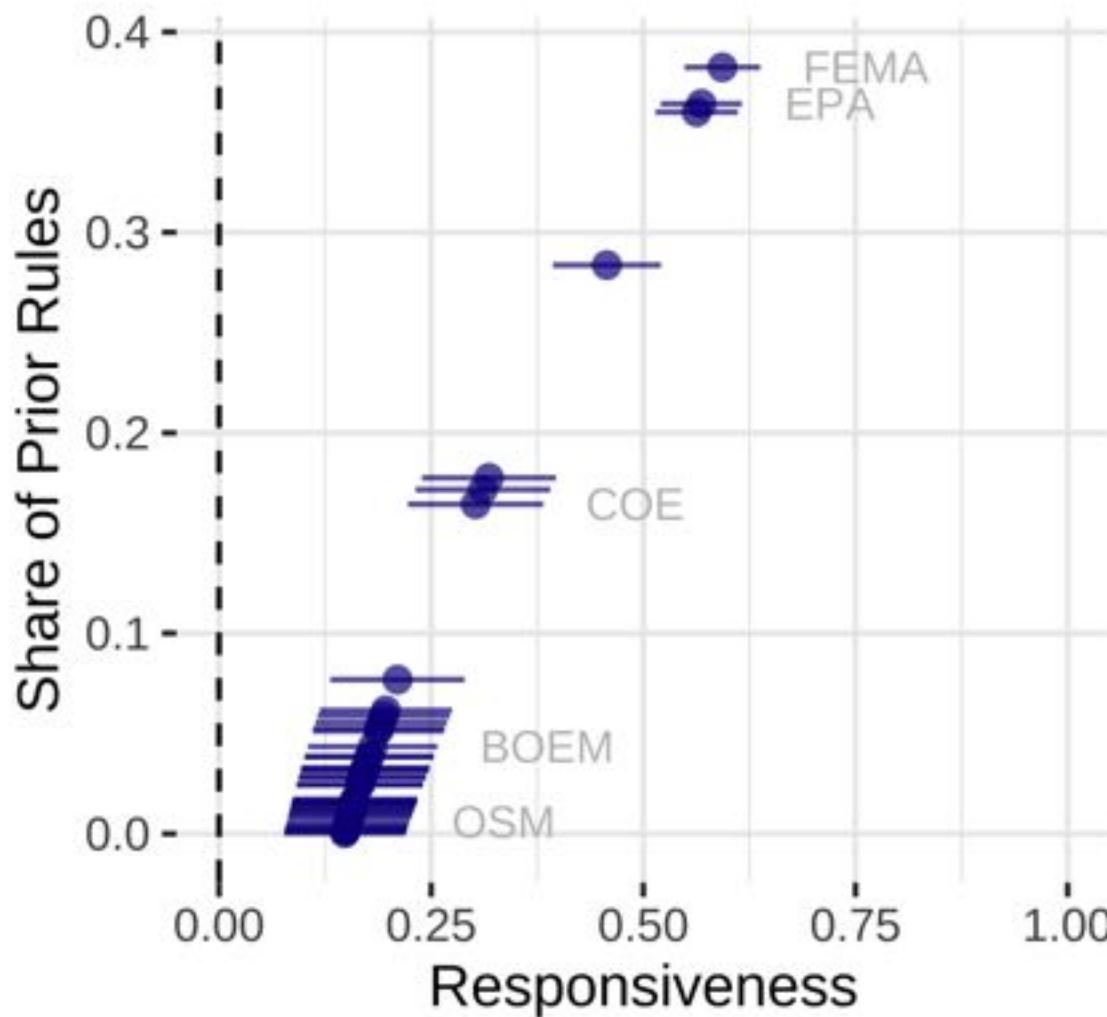


[TABLE]

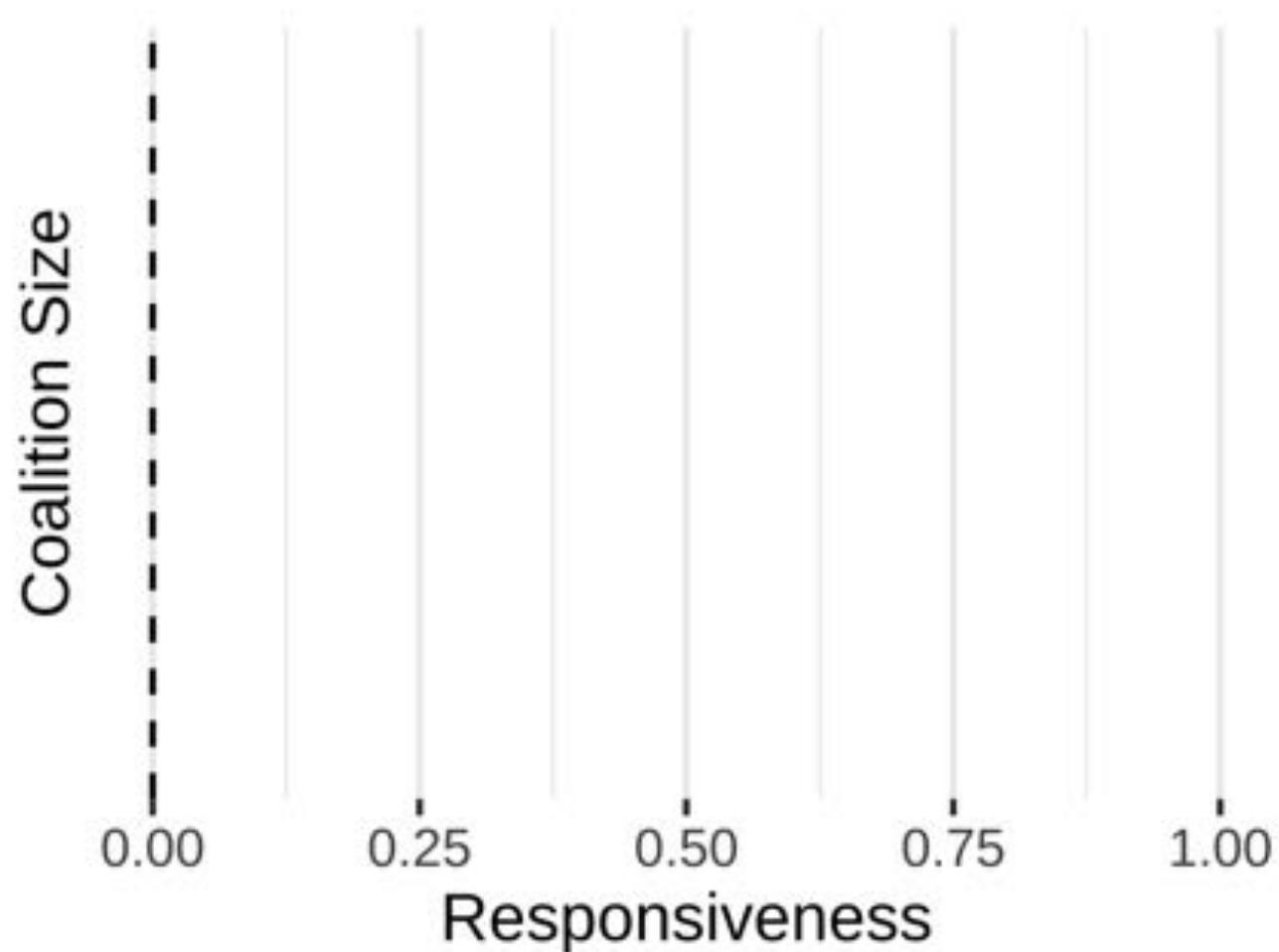
H_2 Agencies
that more
frequently
address
environmental
justice are more
responsive



✓ H_2 Agencies that more frequently address environmental justice are more responsive



H_3 Agencies
respond to
larger coalitions?

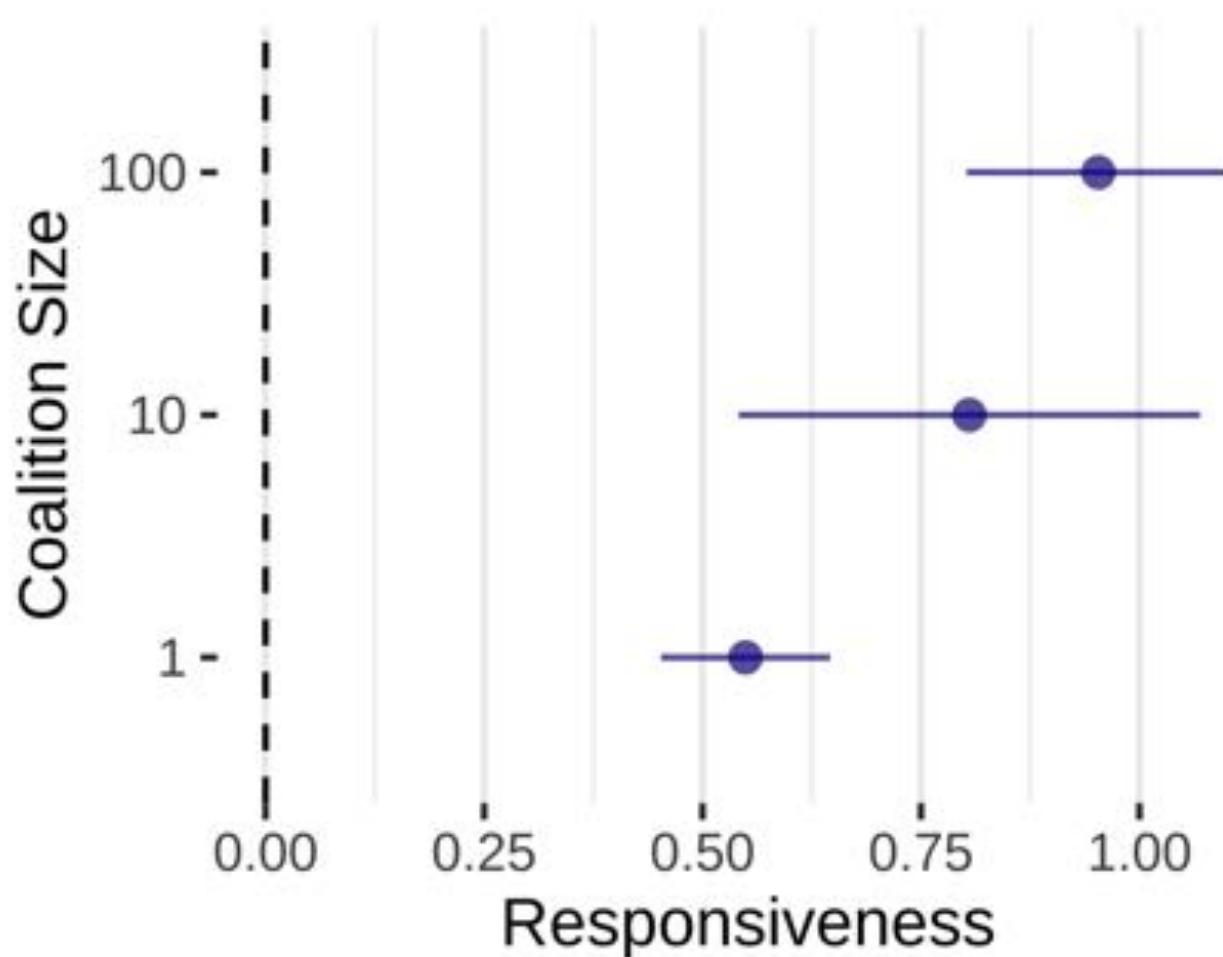


[TABLE]

Devin Judge-Lord (Harvard University)

31/40

✓ H_3 Agencies respond to larger coalitions

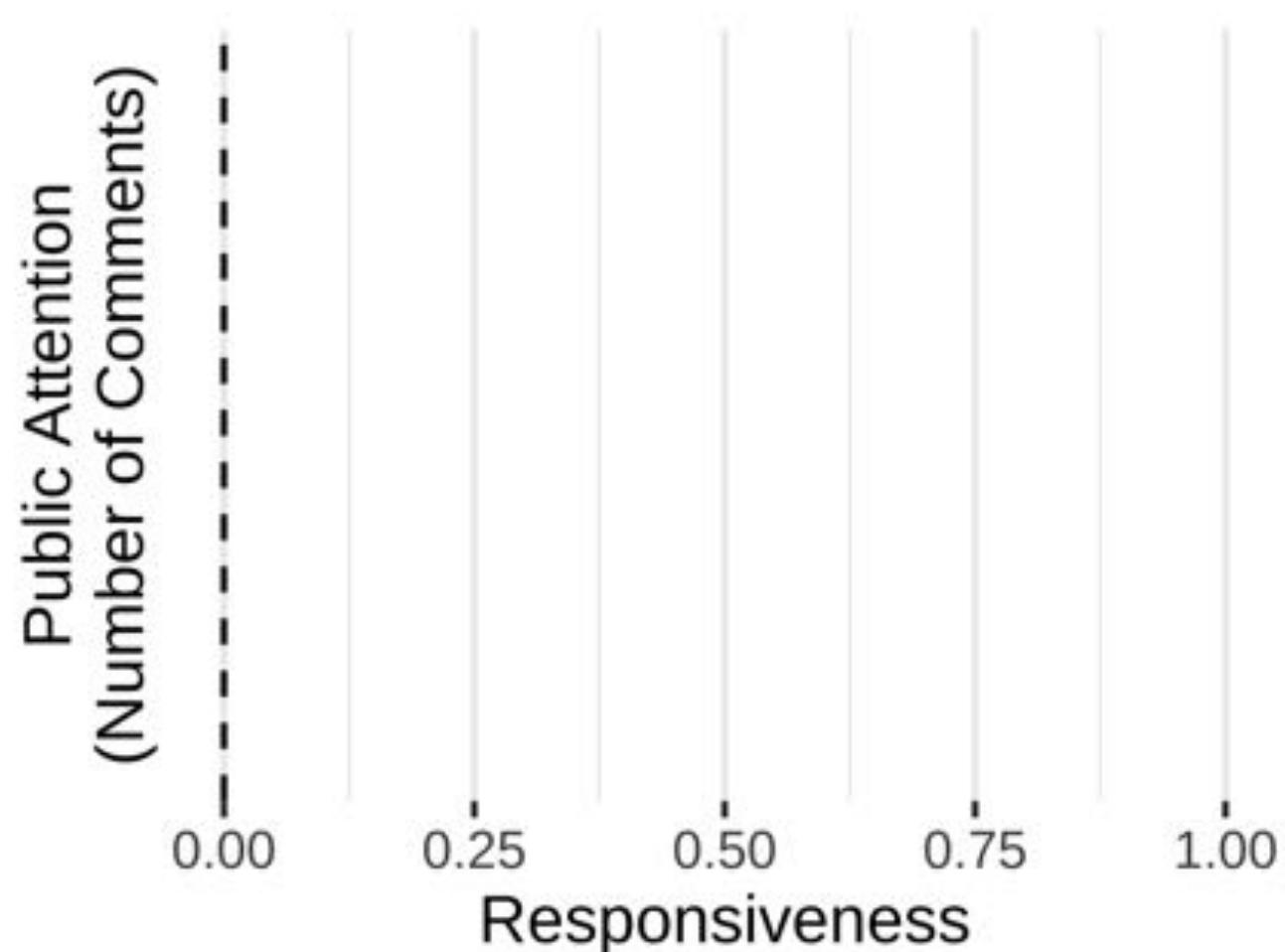


[TABLE]

Devin Judge-Lord (Harvard University)

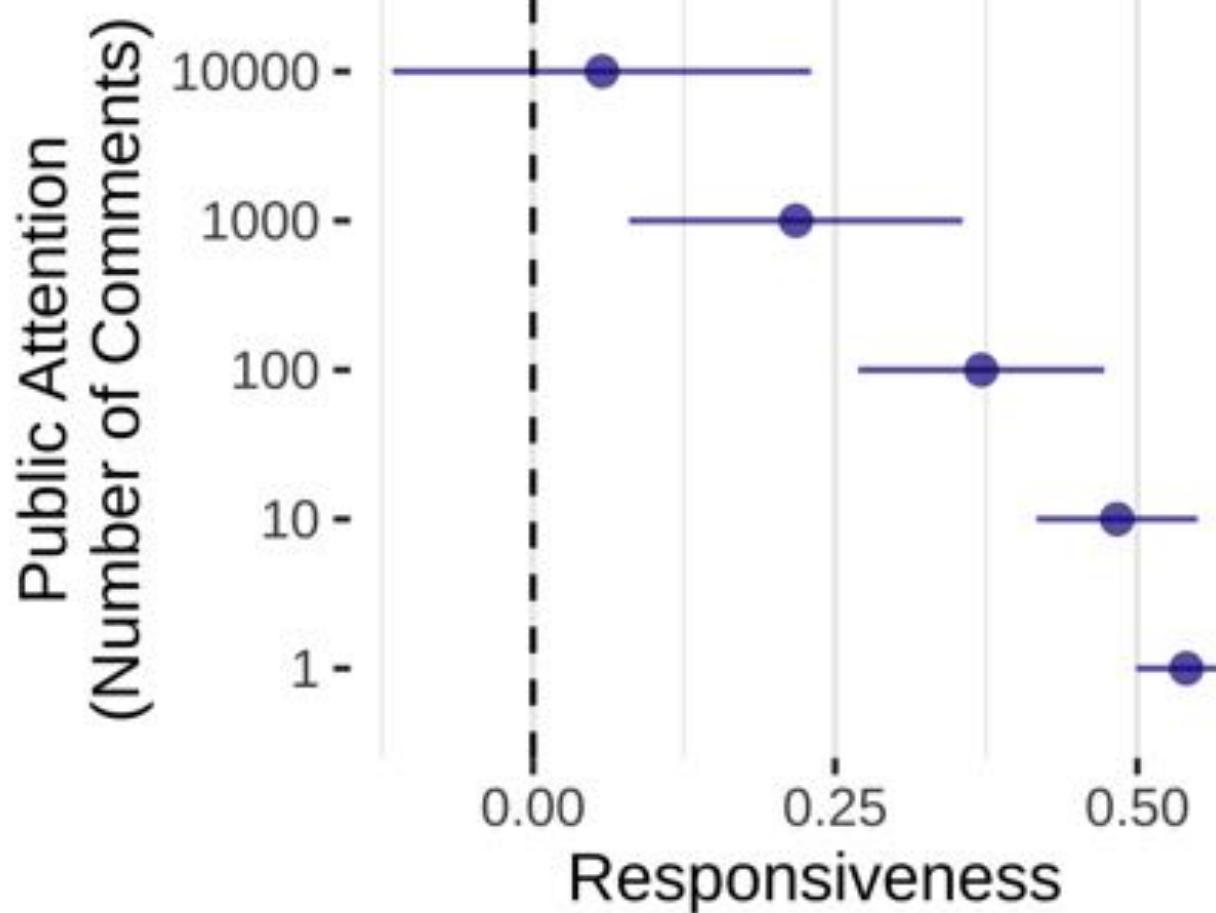
32/40

H_4 Agencies
respond to more
public attention?



[TABLE]

H_4 Agencies
respond to more
public attention?

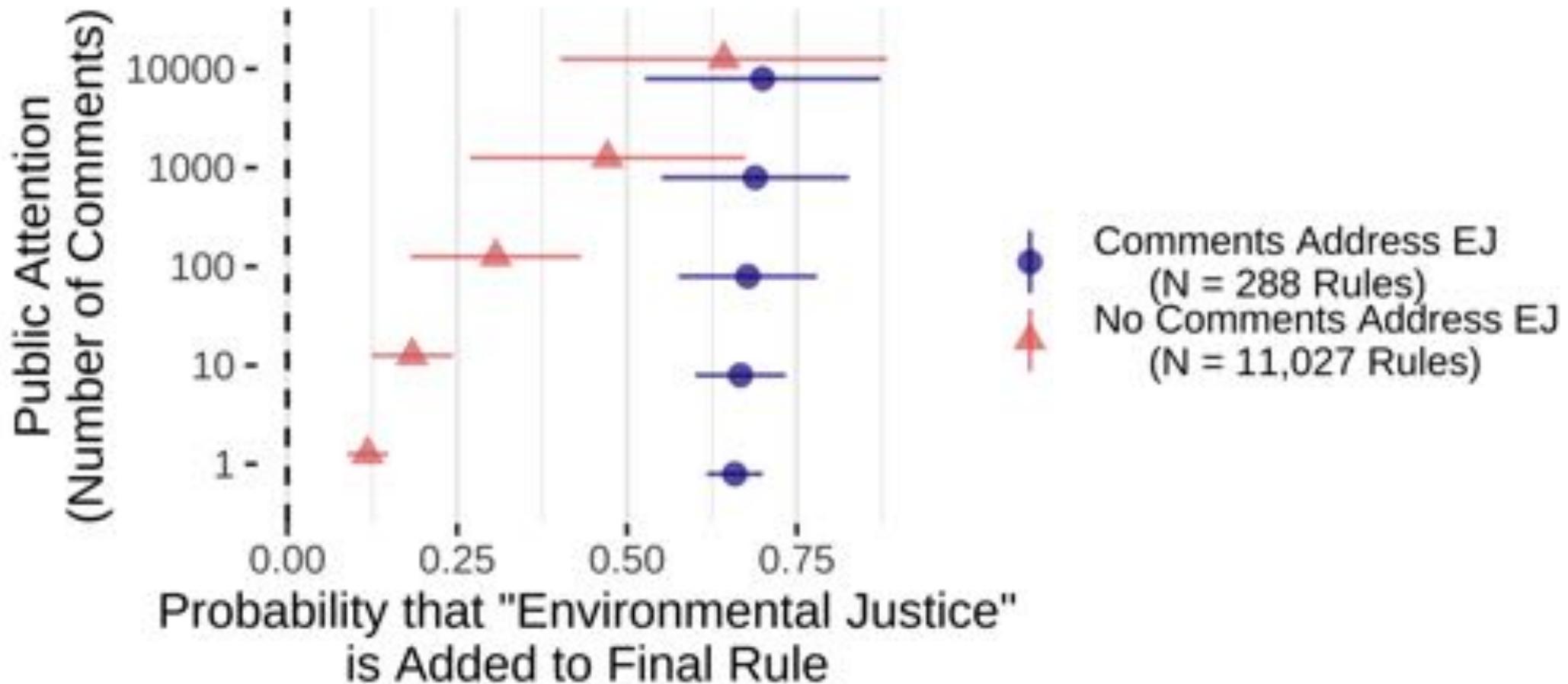


[TABLE]

Devin Judge-Lord (Harvard University)

34/40

✓ H_4 Agencies respond to more public attention (absent specific pressure)



To sum up, yes, movements matter

	Environmental Justice Language Added
Environmental Justice Demands	✓
Coalition Size	✓
General Public Attention	✓
Prior rate	✓

More pressure → more likely that environmental justice language is added. \implies
Public pressure helps advance issues frames.

Replicates with "climate change" [more]

Who gets their substantive policy demands met?

- Business Associations
- Law Firms & National Advocacy Organizations

Hand-coded Lobbying Success by Type of Organization, 2005-2020

Organization Type	N	Success Rate (Overall)	Success Rate (Environmental Justice)
Business	1911	13%	-
Business Association	894	45%	-
Law Firm	288	25%	50%
NGO	6096	27%	24%
NGO-Local EJ	78	4%	0%
Tribe	179	9%	0%



U.S. federal agencies rarely address environmental justice, but they are much more likely to do so when pressured.

National advocacy organizations are more likely to have substantive policy demands met.

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Mobilization



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Substantive policy influence



Surviving judicial review

Thank you!

- Paper, slides, data (Rdata, SQL): judgelord.github.io
- Rules relevant to climate or environmental justice currently open for comment: judgelord.github.io/rulemaking/open

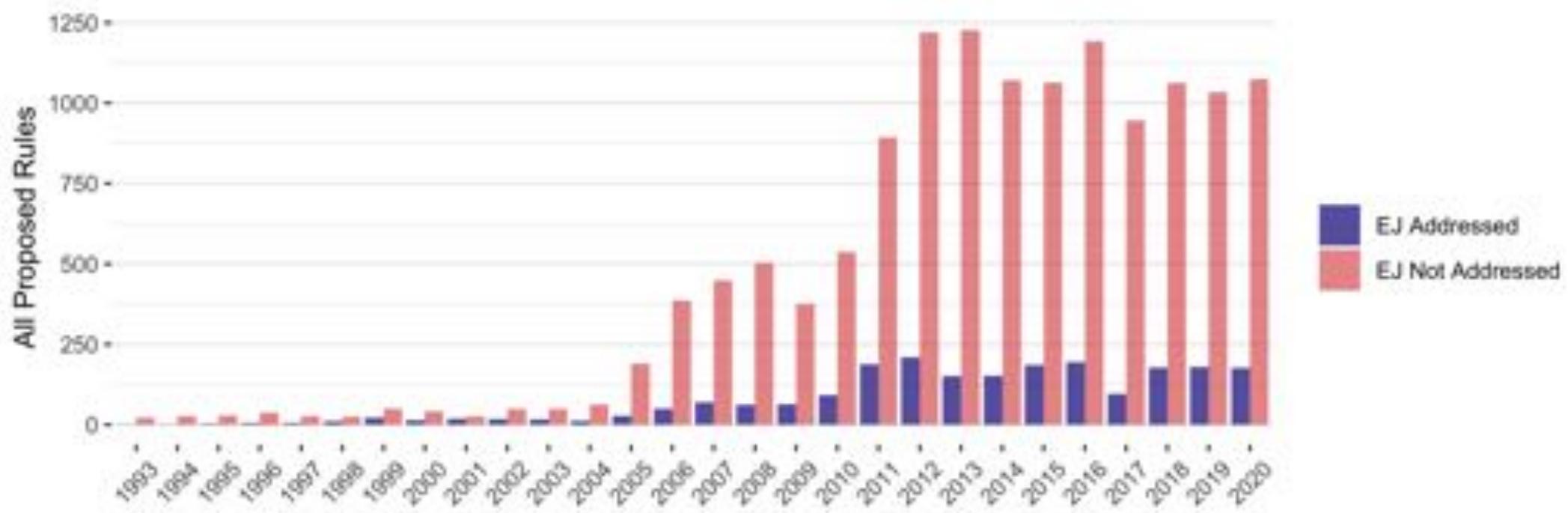
Next

- Audit study: What causes institutional receptivity?
- Co-framing: EJ + "health", "disaster", "climate" & changes in term frequency
- Surveys to compare comments to public opinion
- Lobbying networks
- Feedback: The mobilizing and demobilizing effects of the policy process

Example: Safe Levels of Mercury (For Whom?)

- 2002 Draft: Regulated entities + "Other types of entities not listed could also be affected."
- 2011 Draft: disparate impacts on "vulnerable populations" including "African Americans," "Hispanic," "Native American," and "Other and Multi-racial" groups.
- 2012 Final Rule: EJ analysis adds "minority, low income, and indigenous"
- 2020 Rollback: "These communities may experience foregone benefits"
- 2021 Draft: 2012 Final Rule categories + "differentiated subsistence fisher populations"

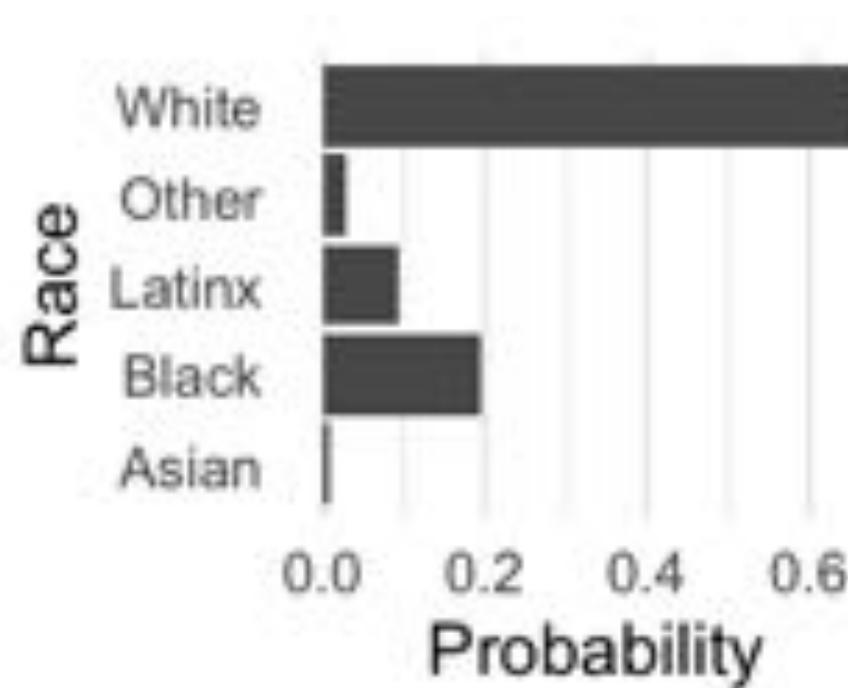
Data: 13,179 Draft and Final Rule Pairs* from 40 agencies, 1993-2020

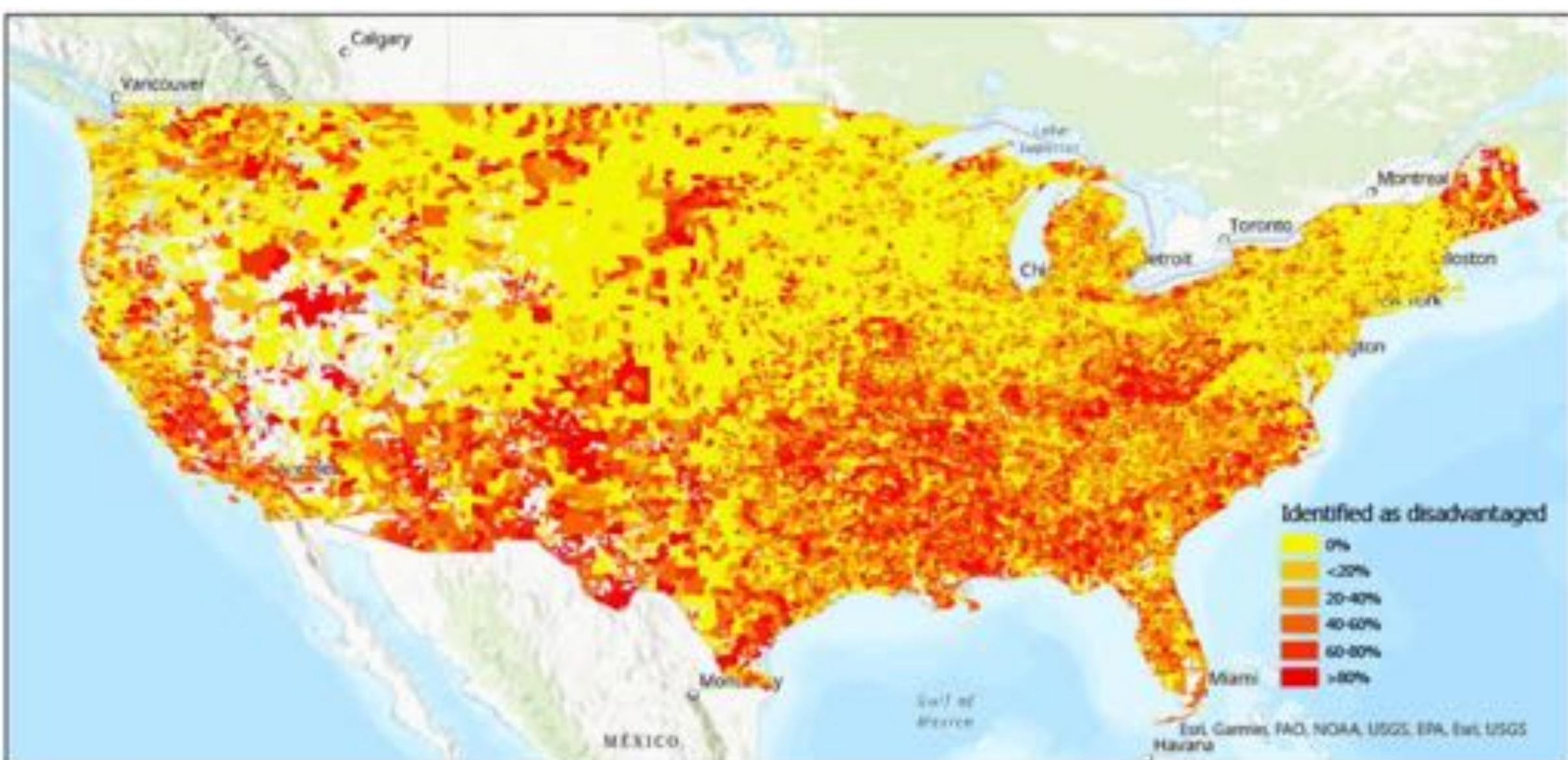


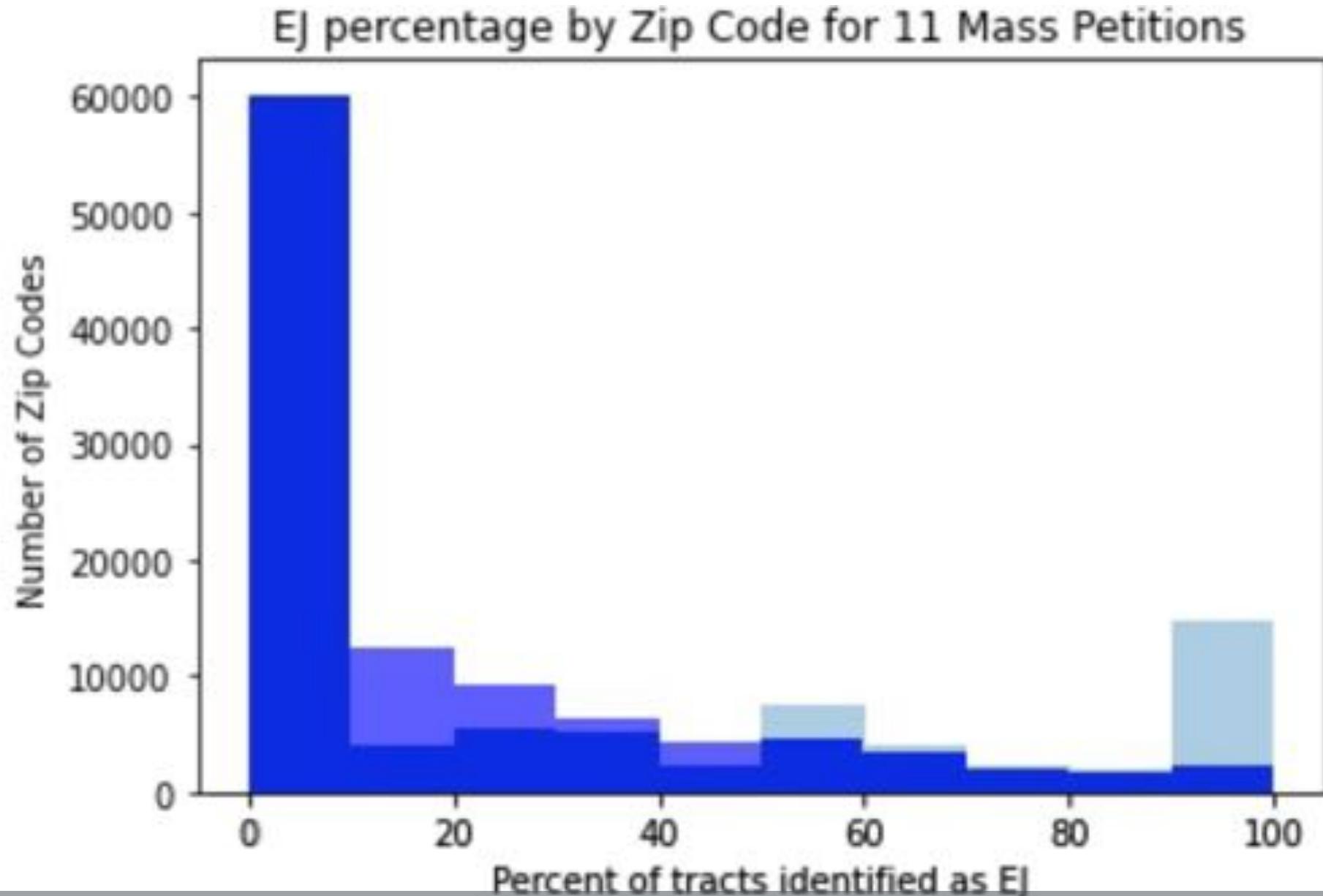
*A few rulemaking dockets have more than one draft or final rule.

Who does notice and comment rulemaking empower?

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

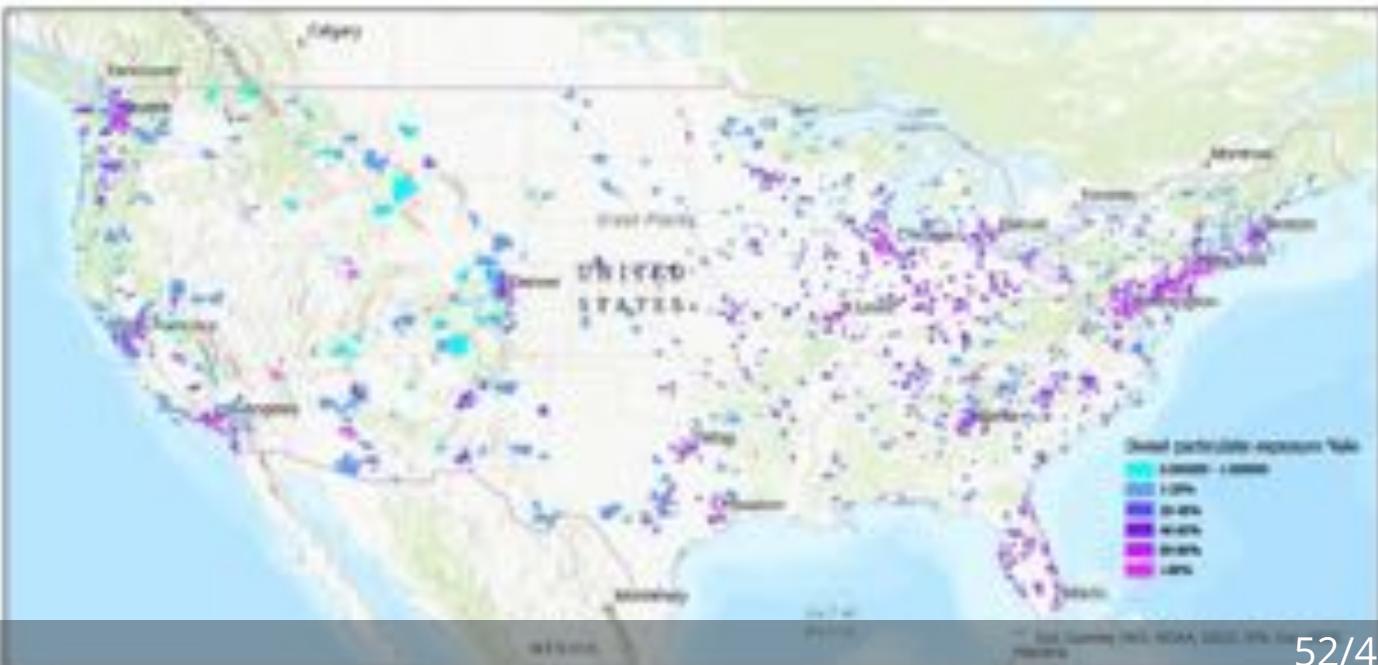
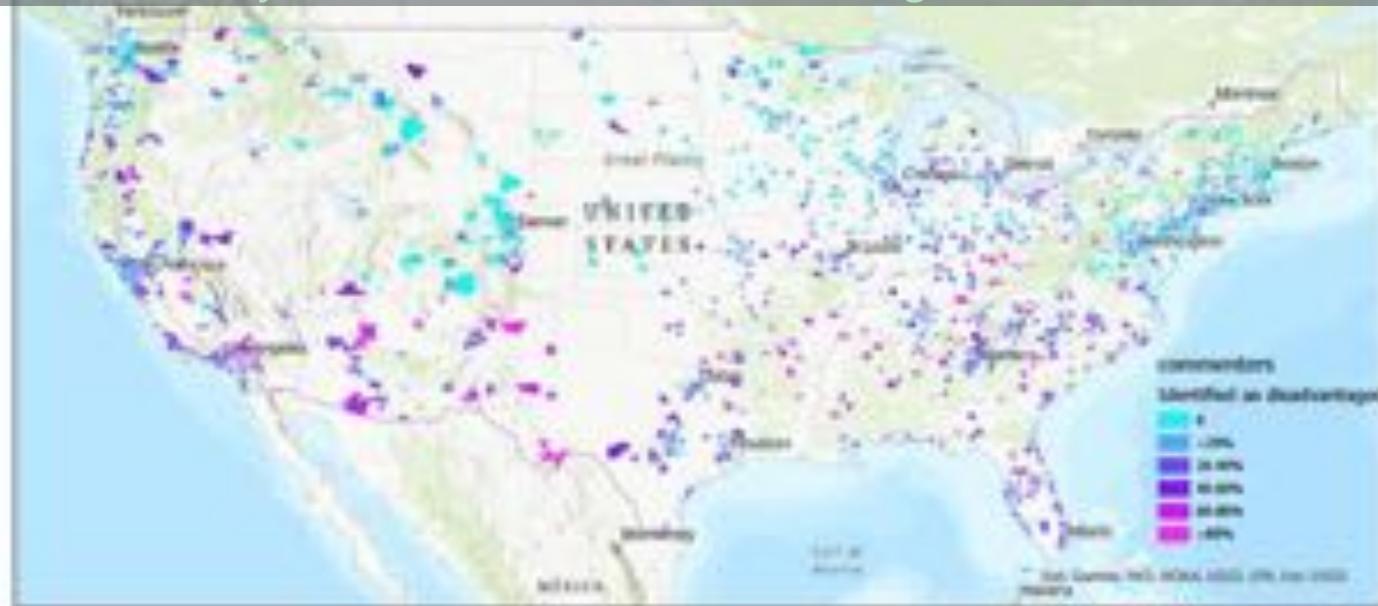




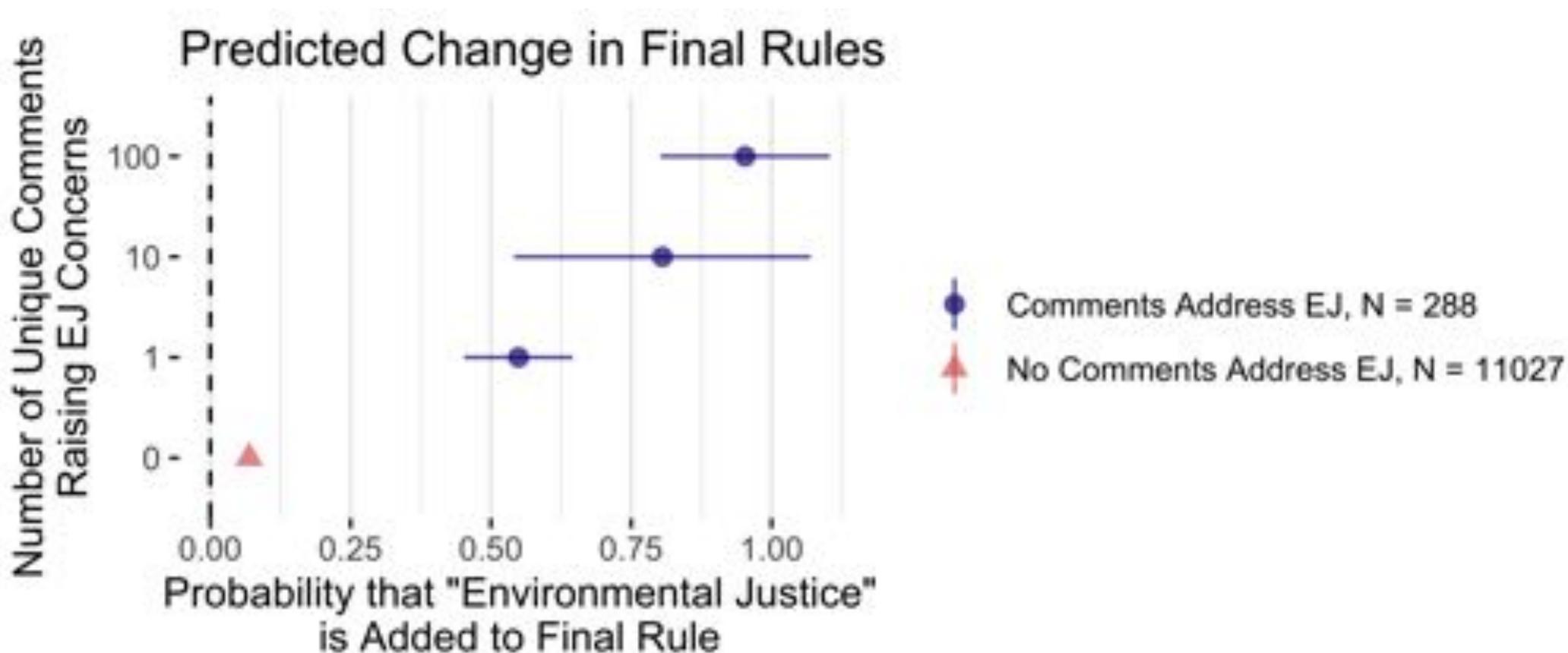


Diesel Tailpipe Emissions

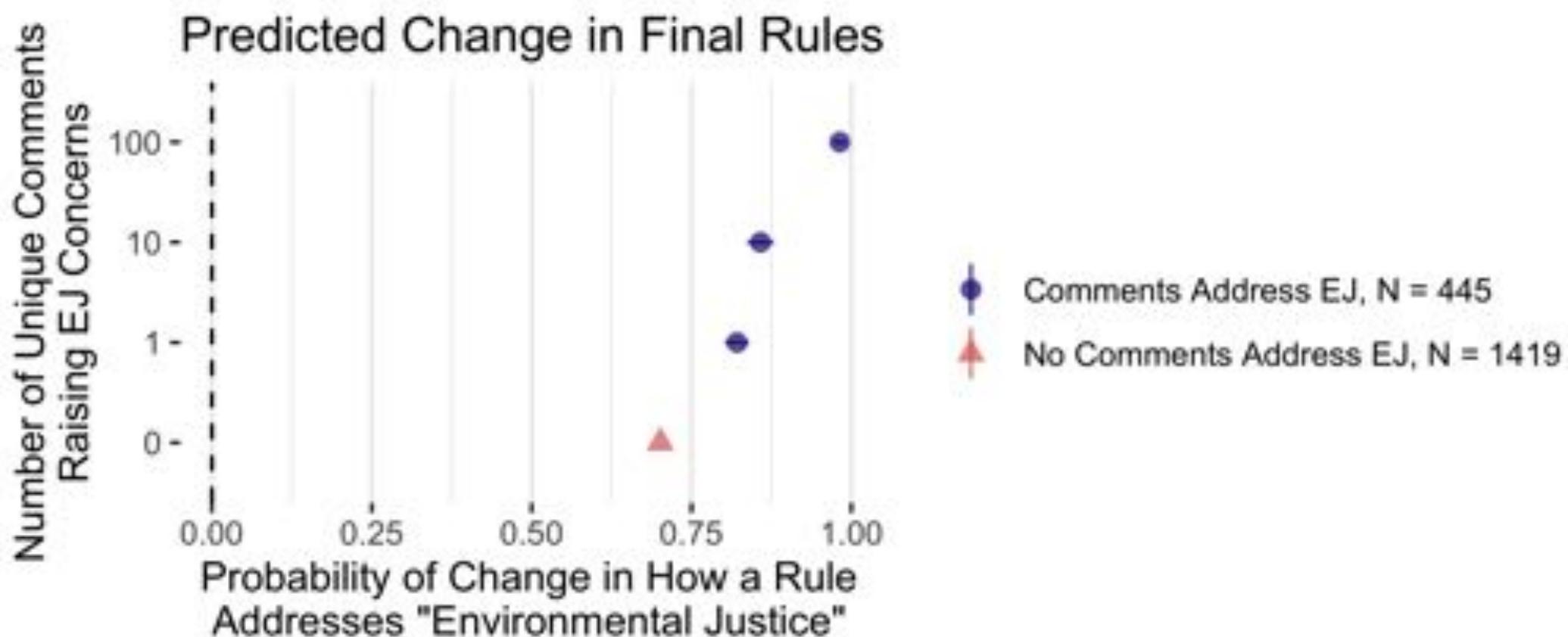
EJ determination and specific variables tell different stories...



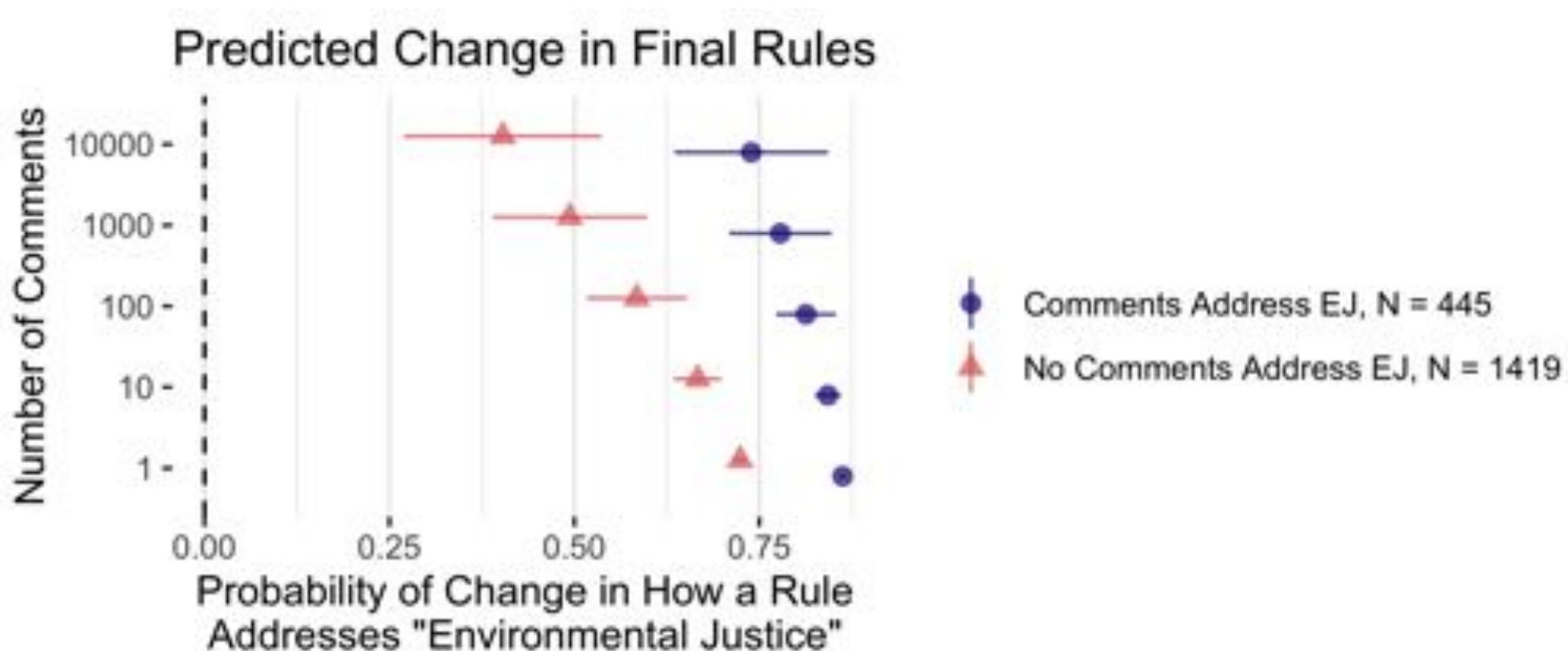
Adding EJ to Policy

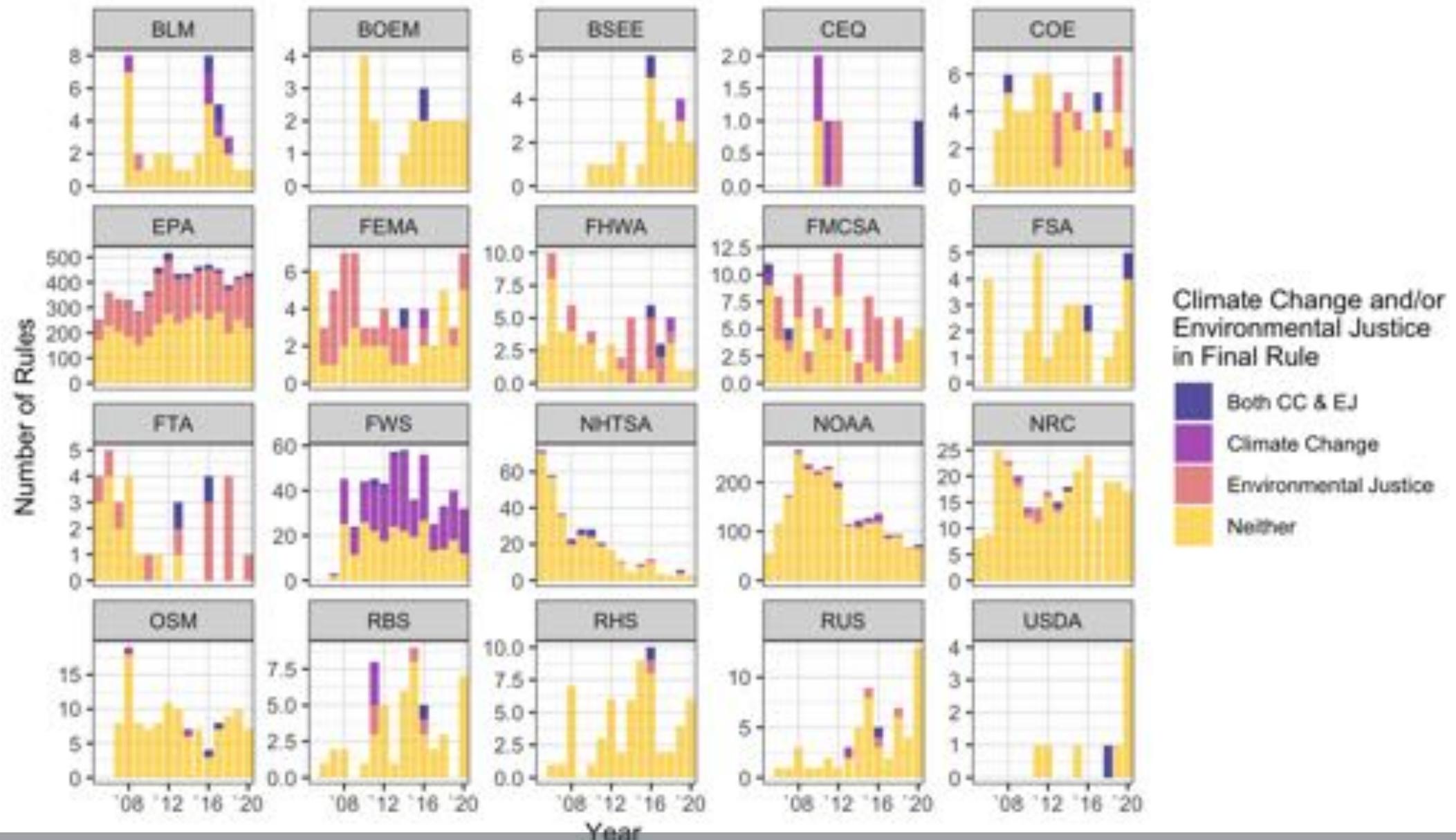


Changing Existing EJ Language

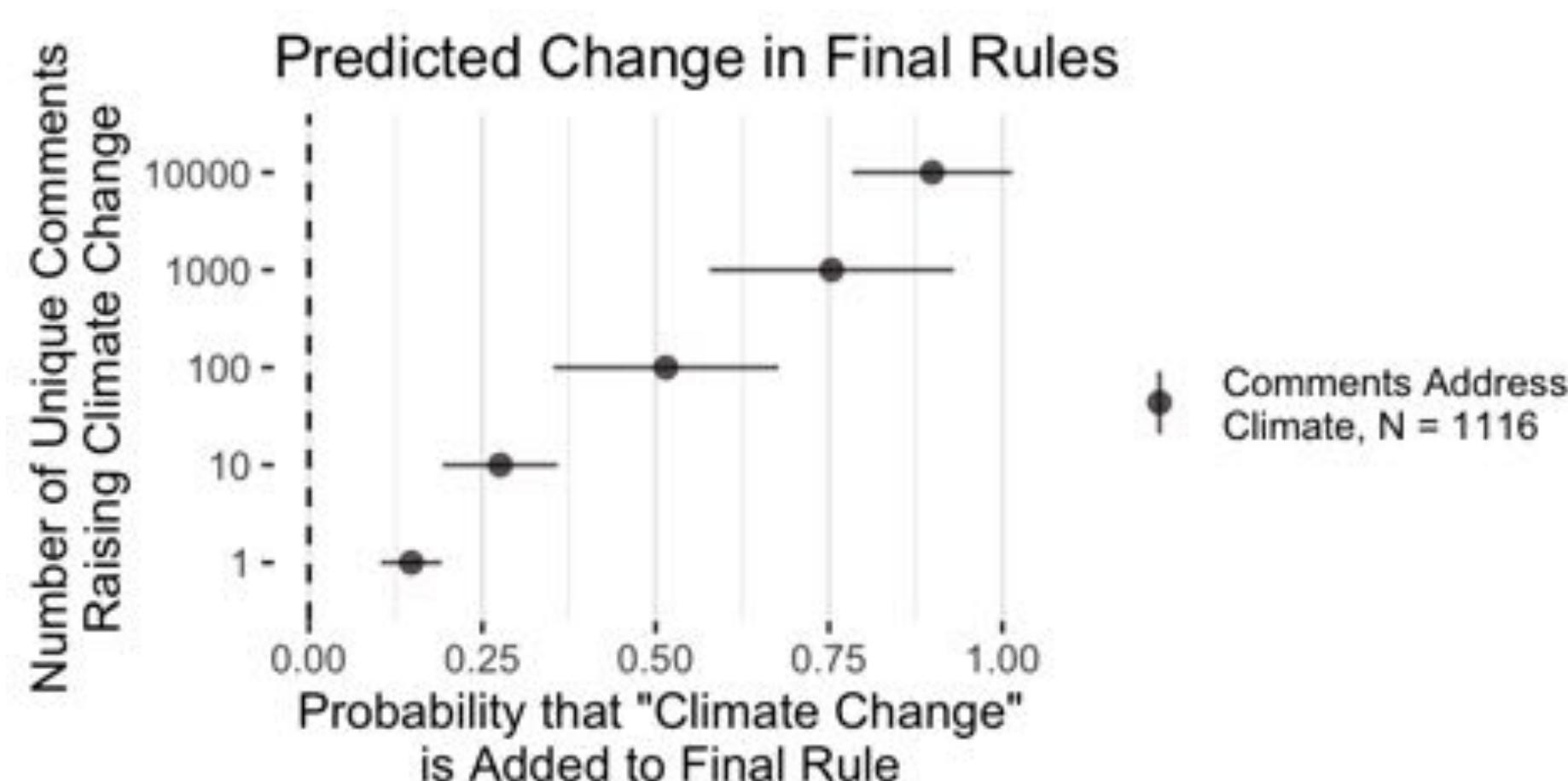


Changing Existing EJ Language





Adding Climate Change to Policy



Substantive Lobbying Success

Larger coalitions → more likely to win

(coalition-level OLS Regression)

Dependent Variable	Lobbying Success
Pressure	0.356
Campaign	(0.316)
Public	0.226
	(0.289)
Coalition	-0.227
	(0.539)
Log(Coalition Size)	0.251*
	(0.106)
Supports Rule	1.269***
	(0.324)

Pressure campaigns mobilize legislators

(coalition-level
Poisson
Regression)

Fire Alarm/Beacon
Mediator Model
(Poisson)

Dependent Variable	Members of Congress in Coalition
Pressure Campaign	0.731+ (0.427)
Public	0.911* (0.357)
Log(Coalition Size)	0.121 (0.142)
Supports Rule	-0.470** (0.151)

When organizations mobilize more legislators, they are more likely to win

(within-organization OLS)

Dependent Variable	Lobbying Success
Pressure Campaign	0.209 (0.251)
Public	0.081 (0.234)
Coalition	0.293 (0.438)
Log(Coalition Size)	-0.185+ (0.105)
Members of Congress	0.019* (0.009)
Supports Rule	0.826*** (0.158)

Human coding and computational text analysis are more powerful when combined in an iterative workflow.

1. Text analysis tools can strategically **select texts for human coders**--texts representing larger samples and outlier texts of high inferential value.
2. Preprocessing can **speed up hand-coding** by extracting features like names and key sentences.
3. Humans and computers can iteratively **tag entities** using regex tables and **group texts by key features** (e.g., identify lobbying coalitions by common policy demands)

Hand-coding dynamic data

Workflow: googlesheets4 allows analysis and improving data in real-time. For example, in Fig. 1:

- The "org_name" column is populated with a guess from automated methods. As humans identify new organizations and aliases, other documents with the same entity strings are auto-coded to match human coding.
- As humans identify each organization's policy "ask," other texts with the same ask are put in their coalition.
- If the organization and coalition become known, it no longer needs hand coding.

Fig. 1: Coded Public Comments in a Google Sheet

url	txt	summary	org_name	coalition	coalition_type	org_type	ask	success
https:// https:// are over, the	When initial fracturing operations	American Society of Civil Engineers	Sierra Club	public	ngo; advocacy	Mandate full public disclosure of all chemicals and other propping agents in the fracturing fluid.		1
https:// https:// barack	Rodrigues ma aug president	Food & Water Watch	Sierra Club	public	ngo; advocacy	proposed rules for regulating hydraulic fracturing on Federal and Indian lands are not only weak, they do not		1
https:// https:// follows we	Our comments are as	Kashia Band of Pomo Indians	Sierra Club	public	gov; tribe	we do not support hydraulic fracturing but we do support the BLM's endeavors to create oversight and		1
https:// https:// does leak	However, natural gas methane	Global Change Consulting Consortium	Global Change Consulting Consortium	public	ngo	No coverage of leakage to the atmosphere of methane as a potent greenhouse gas		1
	While I understand		Energy Citizens	public	gov; state;	the proposed rules impose a redundant regulatory process		

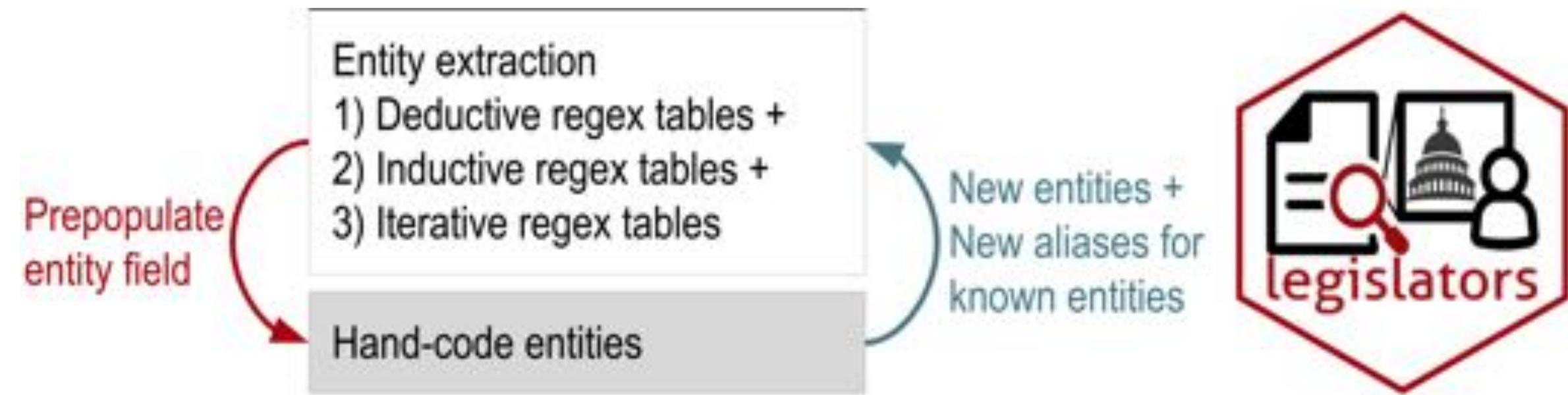
Regex tables to tag entities

- **Deductive:** Start with databases of known entities.

Lookup Table Deduced from Center for Responsive Politics Lobbying Data, Collapsed into an Initial Regular Expression Table

Entity	Pattern
3M Co	3M Co 3M Health Information Systems Ceradyne Cogent Systems Hybrivet Systems
Teamsters Union	Brotherhood of Locomotive Engineers (and &) Trainmen Brotherhood of Maint[a-z]* of Way Employ Teamsters

Fig 2: Iteratively Building Regex Tables



Who mobilizes public comments?

Of 58 million public comments on proposed agency rules, the top 100 organizations mobilized 43,938,811. The top ten organizations mobilized 25,947,612.

The Top 5 Organizations Mobilized 20 Million Public Comments

Organization	Rules Lobbied On	Pressure Campaigns	Percent (Campaigns /Rules)	Comments	Average per Campaign
NRDC	530	62	11.7%	5,939,264	95,795
Sierra Club	591	110	18.6%	5,111,922	46,472
CREDO	90	41	45.6%	3,019,150	73,638
Environmental Defense Fund	111	31	27.9%	2,849,517	91,920

Grouping with key phrases

1. Humans identify groups of selected documents (e.g., lobbying coalitions)
2. Humans copy and paste key phrases
3. Computer puts other documents containing those phrases in the same group (coalition)

Preprocessing tip: Summaries speed hand-coding (e.g., use textrank to select representative sentences).

Next steps

- Compare exact entity linking (regex tables) to probabilistic methods (linkit, fastlink, supervised classified with hand-coded training set)
- Compare exact grouping (e.g., by policy demands) to supervised probabilistic classifiers/clustering

Example: Safe Levels of Mercury (For Whom?)

- 2002 Draft: Regulated entities + "Other types of entities not listed could also be affected."
- 2011 Draft: disparate impacts on "vulnerable populations" including "African Americans," "Hispanic," "Native American," and "Other and Multi-racial" groups.
- 2012 Final Rule: EJ analysis adds "minority, low income, and indigenous"
- 2020 Rollback: "These communities may experience foregone benefits"
- 2021 Draft: 2012 Final Rule catagories + "differentiated subsistence fisher populations" + "children exposed prenatally"

	1	2	3	4
Dependent Variable	EJ Text Added	EJ Text Added	EJ Text Changed	EJ Text Changed
EJ Comment	2.414*** (0.164)	2.298*** (0.082)	0.555+ (0.321)	0.568*** (0.013)
Log(Comments+1)	0.305*** (0.054)	0.232*** (0.027)	-0.142 (0.105)	-0.159*** (0.031)
Log(Unique EJ Comments+1)	0.649+ (0.392)	0.687+ (0.405)	0.333*** (0.077)	0.374*** (0.032)
EJ Comment*Log(Comments+1)	-0.283*** (0.033)	-0.202*** (0.018)	0.064 (0.100)	0.066*** (0.014)
Agency EJ Ratio	8.342*** (0.340)		1.910+ (1.076)	
Num.Obs.	11 315	7067	1864	1842
AIC	3232.9	3084.8	2161.4	2126.9
BIC	3298.9	3290.7	2211.2	2226.3
Log.Lik.	-1607.436	-1512.396	-1071.705	-1045.469
Std.Errors	by: president	by: president & agency	by: president	by: president & agency
FE: president	X	X	X	X
FE: agency		X		X

+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001

	1	2	3	4
Dependent Variable	Climate Change Text Added	Climate Change Text Added	Climate Justice Text Added	Climate Justice Text Added
CC Comment	3.639*** (0.292)	3.138*** (0.372)		
CJ Comment			3.155*** (0.183)	3.179*** (0.039)
Log(Unique CC Comments+1)	0.604* (0.258)	0.526+ (0.287)		
Log(Unique CJ Comments+1)			0.468*** (0.048)	0.334** (0.109)
Log(Comments+1)	0.336*** (0.021)	0.351*** (0.090)	0.380*** (0.019)	0.445*** (0.027)
CC Comment * Log(Comments+1)	-0.410*** (0.102)	-0.415** (0.150)		
CJ Comment * Log(Comments+1)			-0.309*** (0.038)	-0.331*** (0.037)
Num.Obs.	13111	7680	7658	7549
AIC	1836.9	1627.5	810.5	787.1
BIC	1889.2	1856.7	866.1	918.7
Log.Lik.	-911.429	-780.733	-397.266	-374.530
Std. Errors	Clustered (president)	Two-way (president & agency)	Clustered (president)	Two-way (president & agency)
FE: agency		X		X
FE: president	X	X	X	X

+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001