Public Engagement on Rule Making in the Age of Artificial Intelligence

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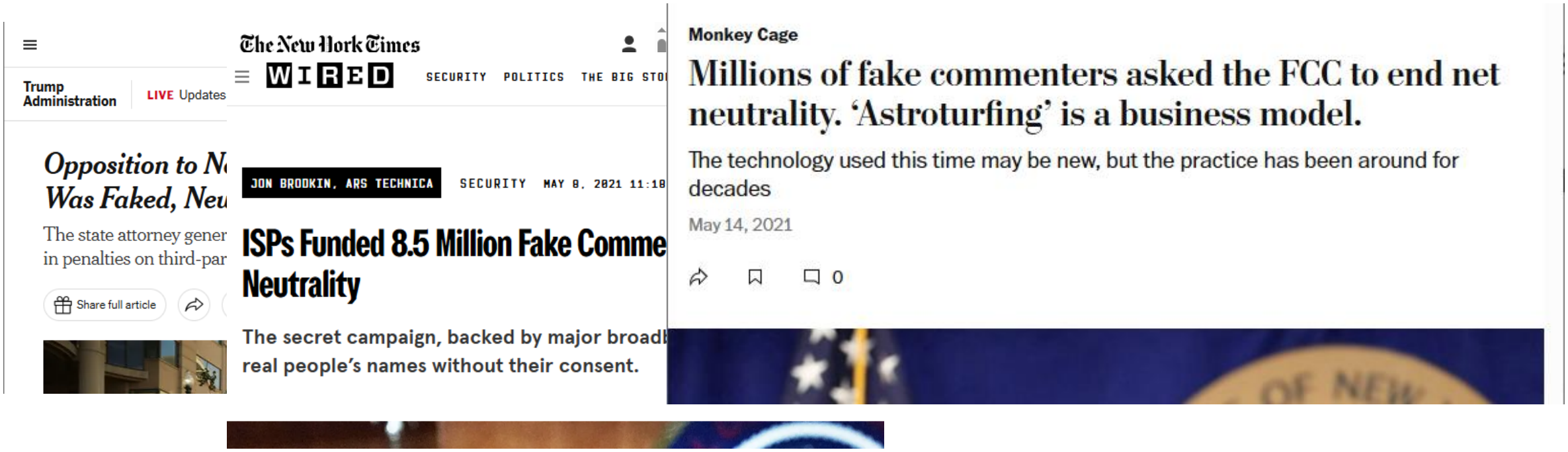
Disclosures

- This work was funded by the National Science Foundation and US Department Agriculture. **Any opinions, findings, and conclusions are mine** and do not necessarily reflect the views of these federal agencies

- Most of this research was performed prior to the change in administration. **Practices around rulemaking are changing.**

FCC and Net Neutrality

- In 2017, the FCC solicited comments on a rule addressing neutrality in computer networks
- Over **25 million** comments were submitted



FCC and Net Neutrality

- Out of 25 million comments, **18 million were duplicates or faked**
- **Over 9 million** people had **names used to submit comments**
- Over **400,000 comments came from Russia**

- Federal and state investigations kicked off
- FCC repealed net neutrality anyway

Notice and Comment in Rulemaking

- In democratic governance, public participation in rulemaking is essential
  - Affected parties can express their interests and concerns
  - Information gathering mechanism for government in setting good rules

- Administrative Procedure Act (1946) allows citizens to comment on pending regulations and **obligates government** to respond to substantive issues
- Beginning in 1990's notice and comment activities **moved online** with a series of laws and executive orders

Notice and Comment in Rulemaking

- Motives in moving activities online:
  - Greater transparency
  - Reduction in cost
  - Greater access for citizens
  - Greater engagement between government and citizens

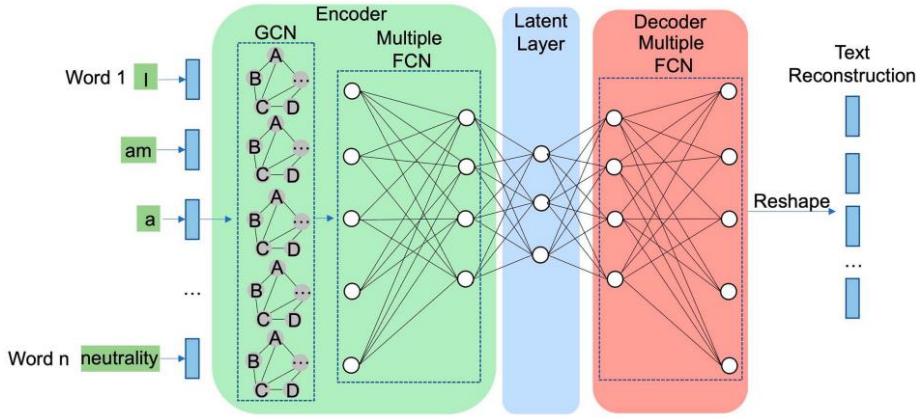
- Also created opening for **Opinion Spam**
  - Mass commenting initiatives
  - Computer-generated comments
  - Fake comments

Research on Opinion Spam in Rulemaking

- Technical approaches to counter opinion spam
- Interviews with rulemakers from 6 federal agencies
  - Procedures for comment evaluation and response
  - How comments are used
  - Legitimacy of process
- Online experiments with ~1300 US citizens about rulemaking
  - Reactions to opinion spam
  - Attitudes about mitigation techniques
- Recommendations to address opinion spam

Technical Interventions

- Can we detect duplicate comments like those that flooded the FCC Net Neutrality docket?
  - Developed new techniques to detect duplicates that uses language structure and unsupervised machine learning
  - **Detection accuracy > 90%** compared to 85-87% of existing methods



- **Generative AI (genAI) changed everything…**

GenAI Capabilities in Commenting

- It takes a couple minutes to create 10,000 unique comments using ChatGPT, Claude, and Gemini
- Built using templates, seed comments, or the documents agencies post to a docket
- Any length, with references or without, advocating any position with support and argument

- **Artificial comments appear more persuasive than human-generated comments from regulation.org**

GenAI Capabilities in Commenting

- **Detection and filtering is extremely challenging**
  - GenAI is too good at creating comments and detection algorithms lag
  - False positives in detection may filter legitimate comments from citizens
  - Detection and filtering has not undergone legal scrutiny

- GenAI can also aggregate and summarize themes in text
  - Develop models that identify, group, and summarize similar comments
  - Testing is ongoing as to the reliability of these techniques
  - Potential basis for automatic tagging for substantive content

Rulemaker Reactions

- **“Comments are not votes.”**
  Comments are part of ***information gathering that leads to good policy***.

- Evaluation of comments is typically manual, after rudimentary screening

- Opinion spam is most often ignored in rulemaking because it is not substantive or is duplicative

Rulemaker Reactions

Administrative Burden

- Large increase on comments on contentious issues
- Increase in evaluation resources resulting from opinion spam

Distorted Representation of Public Opinion

- Opinion spamming part of influence campaigns hoping to shape regulations
- Minimizing input from other important constituencies
- *Debate among agencies about size of this problem*

Rulemaker Reactions

Erosion of Trust

- Opinion spam threatens legitimacy of rulemaking process
- Appointees and elected officers want to know the numbers

Role of AI in Evaluating Comments

- Hesitancy about using AI, but a clear need for better tools
- AI may further undermine trust in regulatory process
- AI use has not undergone legal scrutiny
- *Debate among agencies about AI use*

Experimental Findings – Experiment 1

- We replicated regulations.gov and asked people to read about and comment on a fictitious pending regulation for gun control (ATF)
- For some people, we included opinion spam in the comments

Results

- Engaged people commented, regardless of duplicates, and became more confrontational
- Aware people (the vast majority) were discouraged by duplicated comments

Experimental Findings – Experiment 2

- We replicated regulations.gov and asked people to read about and comment on a fictitious pending regulation for gun control (ATF)
- For some people, we included opinion spam in the comments
- *We told people that AI, AI + agency employee, or agency employee evaluated the comments*

Results

- AI + agency employee generated the most control mutuality and trust

Experimental Findings – Experiment 3 + 4

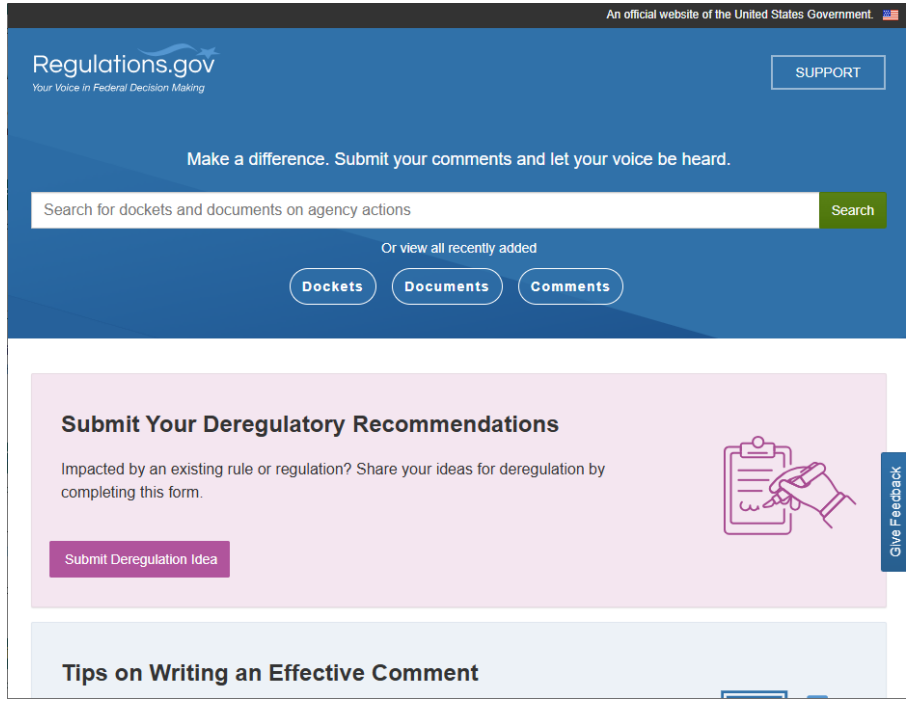
- Asked people to read about and comment on a fictitious pending regulation concerning immigration or transgender rights
- Opinion spam was evident in the comments
- We told people that AI, AI + agency employee, or agency employee evaluated the comments

Results

- Agencies garnered most trust when using employees for evaluation
- Those who had high social trust and trust in machines favored employee evaluation the most

Lessons for today…

- Federal agencies are very different today…
- Unclear what the role of public input is in rulemaking
- Agencies carry out the regulatory priorities of the White House
- **Underlying technical and social forces have not gone away**



Recommendations

Axioms of Public Communication

- Establish and maintain communication relationships with constituencies affected by regulator actions
- Improve the quality of these communication relationships, making them increasingly interactive or symmetrical

Recommendations

Threat of Opinion Spam

- Threats to legitimacy are real
  - Engaged people are going to comment and become more contentious
  - Aware people will become more discouraged
  - Carries reputational costs for federal agencies

Recommendations

Countering Opinion Spam in Soliciting Comments

- Direct trade-off between access and assurance
- Implement bot detection countermeasures
  - reCAPTCHA
  - Verified emails
  - Account creation
- Capture and monitor network traffic for spurts of submissions
- Use duplication detection tools
- Be transparent about opinion spam mitigation

Recommendations

Countering Opinion Spam in Comment Evaluation

- Modern AI aggregation and summarization tools are available
- AI use most palatable when paired with a human operator
- Be transparent about opinion spam mitigation
- AI use has not been subjected to legal review

Final Thoughts…

- In most cases, comments on regulations reflect people's attitudes and feelings about government actions in their lives.
  They deserve respect
- Despite ideological differences, people I talked to are **trying to do the right thing**
  - Balancing entrenched, competing interests
  - Dealing with very complex problems
  - No easy answers

- **Preserve trust and legitimacy of rulemaking process**

Questions and Comments

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