

Chapter 2

An Experiment in E–Rulemaking with Natural Language Processing and Democratic Deliberation

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ABSTRACT

Public comment processes in federal and state agency rulemakings are among the most substantial potential arenas for public input into government. Unfortunately, these processes have not been much used for thoughtful public input. This chapter explores whether online democratic deliberation and natural language processing tools, can empower participants to provide more informed input into an agency rulemaking. It also sought to determine whether such an approach had other positive effects such as enhancing citizenship and increasing confidence in the pertinent agency. Findings indicate improvements in participant knowledge of the network neutrality rulemaking topic, systematic attitude change, improvements to citizenship measures, and increased confidence in the Federal Communications Commission. Results suggest that public deliberation under conditions needed to involve substantial numbers of people—namely, online deliberation without facilitators—can improve public comments into federal and state agency rulemakings while strengthening the citizenship qualities of participants. They also indicate that many of the desired effects of face-to-face deliberation with trained facilitators can also be obtained online without facilitators.

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INTRODUCTION

E-government researchers and practitioners are increasingly interested in using online technologies not merely for transaction processing but also to open a public space for citizen-to-citizen and citizen-to-government interactions. One of the greatest potential spaces for meaningful public input into government is the domain of public comments on government agency proposed rules. Yet, research suggests that public comments tend to be of relatively low quality when it comes to their utility for government agencies (Shulman, 2006). Public and even expert comments in the rulemaking process might be improved by utilizing deliberative techniques that involve small group discussion. Held online, such discussion would permit large numbers of geographically dispersed individuals to participate. Deliberation is, however, typically conducted with trained facilitators. Agencies would be hard pressed to find trained facilitators for even a moderate number of small groups and face concerns about accusations of bias against these facilitators. A possible solution would be to combine Natural Language Processing (NLP) technologies to serve some of the functions of facilitators: answering questions, summarizing discussion, connecting people with common interests, eliciting comments from the quiet, and so forth. Thus, our project tested a combination of NLP technologies that would cover facilitator functions, in the hope of building a Discussion Facilitation Agent (DiFA).

This chapter describes the NLP technologies used and presents research from an experiment on the policy topic of network neutrality, which is the question of whether rules should be adopted to require internet service providers to treat all digital traffic equally. Our research question is whether online and unfacilitated deliberations and NLP technologies would lead to some of the positive outcomes of deliberation expected from theory and prior research on face-to-face deliberation with facilitation. The experiment

showed that deliberation had impacts on a range of outcomes—such as increased topic knowledge, attitude change, positive changes in indicators of citizen engagement, and increased confidence in the FCC—but that the technologies deployed had limited effects. The chapter concludes with an examination of the limitations of the study and potential ways in which the NLP technologies could be further developed to enhance citizen deliberation on policy in the future.

E-DEMOCRACY AND RULEMAKING

The recent trend in open government initiatives in the United States and elsewhere has brought about noteworthy new opportunities for citizen engagement not only in interfacing with government but in participating more deeply in the policy process. The Obama administration's efforts on open government led to three principles: transparency, collaboration, and participation ("Transparency and Open Government," 2009). One of the ways that open government initiatives can manifest is through using the myriad of applications cast under the umbrella of "Web 2.0" (Chun, Shulman, Sandoval, Hovy, 2010). These technologies primarily include social media that enable collaboration and sharing among individuals, helping to facilitate the "wisdom of crowds" (Shirky, 2008). ICTs in general have been looked to for increasing efficiency and inter-agency cooperation as well as interfacing more effectively with the public (Margetts, 2009), in what Dunleavy, Margetts, Bastow and Tinkler (2006) refer to as a new "Digital Era of Governance".

Of particular relevance for the project at hand are the opportunities for increased participation by citizens in the policy process. Although there have been some limited efforts to engage the public in federal policy making (Heidinger, Buchmann, & Böhm, 2010), one of the underutilized and understudied opportunities is through the public comment process in government agency rulemakings.

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