THE SPIRIT OF TECHNOLOGY IN E-GOVERNMENT: DESIGNING DEMOCRACY CAPABILITIES FOR ONLINE CITIZEN-GOVERNMENT INTERACTION

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Abstract

This paper aims to better understand the various democratic ideals manifested in designs of online crowdsourcing tools that are contracted by government entities. It seeks to answer questions about crowdsourced tools that are developed to serve a democratic purpose, including: (1) how are designers' intentions incorporated? (2) what are the imagined user groups? and (3) what are the expected outcomes? The startup and technology vendors that contract with North American government bodies provide a particular context in which democratic freedoms are valued. The sample for this study consists of firms that have contracts for crowdsourced tools with Canadian or American government bodies. Questions were addressed through interviews with the founders or programmers of these technology firms to learn about the design of their products. To advance knowledge across disciplinary boundaries, we review literature on design from science and technology studies, democratic values from political science, and stakeholder theory from management. This study reveals how these perspectives have implications for contracting practical, technical solutions for government.

Keywords: spirit, technology, e-government, democracy, crowdsourcing

Introduction & Literature

Designers' intentions continue to generate lines of inquiry about the technology products they create in the fields of communication, sociology, management, and science and technology studies. Building on those investigations, this study seeks to explore questions about intentions built into crowdsourcing technologies, designers' thoughts about user groups, and intended outcomes of the technologies. Crowdsourcing refers to the process of connecting organizations to stakeholders via the Internet to solve problems, craft policy, or design products (Brabham, 2013). In particular, Adaptive Structuration Theory (AST) has theorized about a coherent and incoherent "spirit" and the features of a technology to account for the process of shaping relevant groups' social structures (DeSanctis & Poole, 1994; Markus & Silver, 2008; Silver & Markus, 2013). Spirit refers to the general intent associated with the values and goals of a set of structural features that are presented to users in a technology

(DeSanctis & Poole, 1994). Values themselves are contested (Cheng & Fleischmann, 2010). Technology designers can strategically market these platforms to serve multiple constituencies and their desired values through particular vocabulary, while duly neglecting to acknowledge tensions in fulfilling these conflicting needs (Gillespie, 2010). This study examines the technology solutions provided by vendors for government-citizen interactions, and for those purposes, we draw from literature on online deliberative democracy. For instance, Noveck (2003) argues that effective online deliberative democratic processes should be informed by 11 normative values, including accessibility, freedom from censorship, accountability, transparency, and pluralism (pp. 12-17). Thus, our first research question is (1) how will technological products designed for citizen-government interaction both inculcate and promote multiple interpretations of democratic values?

Our study also develops further on sociotechnical systems research to understand the images of users employed by designers and engineers to construct technologies that serve government clients. The depictions of users can include (a) people who will use the system, and their relationships, as well as (b) users that will ultimately benefit from the direct users' contributions, such as the government entities (Wyatt, 2008, p. 171). Implicated users, or (c) members of the broader community served by but who may not have any physical contact with the system, may also be distinguished in this study (Clarke, 1998). The second research question is (2) what are the intended user groups for crowdsourcing tools that seek to serve democratic purposes?

Finally, embedded within the e-government philosophies of technology arises a management belief that computerization will automatically enhance productivity gains and enable social transformation, otherwise known as justificatory technological determinism (Edwards, 1995). Answering a call from Wyatt (2008), this study seeks to illustrate how technologically deterministic rhetoric compels both the request for and design of these products by decision makers to serve specific goals and create particular outcomes for multiple stakeholders. Despite these top-down outcome intentions, Mansbridge (2010) asserts that these expectations may never fully reach the ideal of consensus because of self-interest, whereas Weick (1995) believes that only a plausible agreement to make sense of events is needed in the context of ongoing interaction. Finally, the third research question is (3) what are the types of supposed goals or outcomes of these tools imagined by designers or stated by government clients?

Data Collection & Methods

Participants were sought who work with the design of crowdsourcing technology in their firm and work in a firm that has or is pursuing a contract with a municipal or regional (state, provincial, or larger region) government. Founders or programmers at these technology firms provided insight into the design of their products. The study consists of semi-structured one-hour interviews with fewer than 30 participants via phone or video conferencing (e.g., Skype). Theme saturation in interviews typically occurs by the twelfth interview, with metathemes appearing as early as the sixth interview (Guest, Bunce & Johnson, 2006). Thus this ongoing research aims for no more than 30 interviews total, or until themes reach a saturation point. Transcriptions of recorded

interviews will be analyzed according to the constant-comparative technique of grounded qualitative data analysis (Corbin & Strauss, 2008; Charmaz, 2014). Analysis will generate themes and sub-themes, which will be reported, along with selected interview transcripts excerpts for illustration, about intentional design, intended users, and expected outcomes.

Conclusion & Implications

E-government tools have the ability to transform government-citizen interaction, but an explication of the designed values laden in these technologies with an interrogation of democratic values has not been undertaken. We anticipate findings will help shape policy around vendor contracts to enable e-government relations.

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