Chapter 4
The Four Urban Governance Problem Types Suitable for Crowdsourcing Citizen Participation

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ABSTRACT

Crowdsourcing is a method for harnessing the collective intelligence of online communities to solve specific problems or produce goods. Largely known as a business model, crowdsourcing has begun to make inroads as a supplemental public participation tool for governance, as a way to engage citizens in the business of government functions. Validating a new typology of crowdsourcing cases, this chapter outlines the four urban governance problem types that the crowdsourcing model can successfully address. This chapter also discusses the right of free speech in online crowdsourcing communities and its relevance for urban governance crowdsourcing applications in free societies. Concluding the chapter is an examination of crowdsourcing's place in the policy-advisory spectrum and the risks associated with bringing crowdsourcing applications into public participation programs.

INTRODUCTION

In the past decade, crowdsourcing has emerged as an alternative public participation method for governance and planning projects that may complement traditional face-to-face methods for gathering citizen input. Crowdsourcing is an online, distributed problem solving and production model that leverages the collective intelligence of online communities for specific managed tasks

(Brabham, 2008a; Howe, 2006a). The process of crowdsourcing to harness citizen input on governance and planning decisions is another application of deliberative democratic principles which drive traditional, face-to-face participation methods, such as workshops and hearings (Brabham, 2009a).

This potential for crowdsourcing in governance is now being realized, thanks in part to pushes by politicians, citizen groups, and actions in the U.S. by the Obama Administration (Obama, n.d.). Crowdsourcing and other participatory

online methods may drive e-governance finally beyond merely providing information, forms, and online transactions (McDonough, as cited in Noveck, 2003) to more radical, active forms of engagement. Recent government crowdsourcing projects include the U.S. Office of Management and Budget's SAVE Award (Long, 2009), the U.S. Patent and Trademark Office's Peer-to-Patent project (Noveck, 2006), the U.S. Federal Transit Administration's Next Stop Design project (Brabham, Sanchez, & Bartholomew, 2010), and many others.

In this chapter, I offer a typology of urban governance problem types suitable for crowdsourcing, validating and extending previous work in this area (Brabham, 2012). This examination includes analysis of actual cases of crowdsourcing in governance, as well as speculation on future applications of crowdsourcing to improve city administration through citizen participation. Understanding the kinds of problems that can be addressed by governments using the crowdsourcing model is a first step in the development of applications to improve public engagement in government work.

Also in the chapter I explore two important issues relating to the use of crowdsourcing in governance: moderation and free speech rights in managing disruptive and destructive online communities, and the government's commitment to use the crowd's input on a policy-advisory spectrum.

BACKGROUND

The concept of crowdsourcing is underpinned by a larger, older academic discourse on collective intelligence and open innovation (Chesbrough, 2003; Lévy, 1995; 1997; Von Hippel, 2005), but it was not until Jeff Howe (2006a) coined the term "crowdsourcing" in a June 2006 *Wired* magazine article that scholars and practitioners beyond the disciplines of computing and business took note. Howe (2006a, 2008), Brabham (2008a),

and others (e.g., Kleeman, Voss, & Rieder, 2008; Vukovic & Bartolini, 2010; Whitla, 2009) have each provided varying definitions for crowdsourcing, but in a recent article Estellés-Arolas and González-Ladrón-de-Guevara (2012) synthesized these many interpretations into a single integrated definition:

Crowdsourcing is a type of participative online activity in which an individual, an institution, a non-profit organization, or company proposes to a group of individuals of varying knowledge, heterogeneity, and number, via a flexible open call, the voluntary undertaking of a task. The undertaking of the task, of variable complexity and modularity, and in which the crowd should participate bringing their work, money, knowledge and/or experience, always entails mutual benefit. The user will receive the satisfaction of a given type of need, be it economic, social recognition, self-esteem, or the development of individual skills, while the crowdsourcer will obtain and utilize to their advantage what the user has brought to the venture, whose form will depend on the type of activity undertaken. (p. 197)

In plain terms, crowdsourcing involves an organization opening a challenge or a problem up to an online community and that online community—the "crowd"—providing solutions, all in a mutually beneficial arrangement.

Crowdsourcing must always involve a mix of bottom-up, open, creative input from an online community and top-down, hierarchical management from an organization. Cases such as Wikipedia, YouTube, and open source software are commonly conflated with crowdsourcing, but I have argued (Brabham, 2008a; 2012) that these instances do not count as true crowdsourcing because there is no entity directing the creative activities of online community members in a managed way for a specific purpose. Rather, these instances resemble "commons-based peer production" (Benkler, 2002), where an organiza-

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