CROWDSOURCING AS A MODEL FOR PROBLEM SOLVING:
LEVERAGING THE COLLECTIVE INTELLIGENCE
OF ONLINE COMMUNITIES FOR PUBLIC GOOD

by
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ABSTRACT

As an application of deliberative democratic theory in practice, traditional public participation programs in urban planning seek to cultivate citizen input and produce public decisions agreeable to all stakeholders. However, the deliberative democratic ideals of these traditional public participation programs, consisting of town hall meetings, hearings, workshops, and design charrettes, are often stymied by interpersonal dynamics, special interest groups, and an absence of key stakeholder demographics due to logistical issues of meetings or lack of interest and awareness. This dissertation project proposes crowdsourcing as an online public participation alternative that may ameliorate some of the hindrances of traditional public participation methods.

Crowdsourcing is an online, distributed problem solving and production model largely in use for business. It leverages the collective intelligence of online communities by soliciting ideas and solutions for an organization from these communities through the form of an open call. The mechanism of one type of crowdsourcing, the peer-vetted creative production approach, aligns with the goals of public participation programs. In light of this, Next Stop Design was launched in 2009 in an attempt to test crowdsourcing in a public participation context for transit planning. Next Stop Design was an online competition where users submitted bus stop shelter designs and voted on the designs of peers to determine a best design.

This study examines the effectiveness of the Next Stop Design project as an online deliberative democratic process, as perceived by Next Stop Design participants,
and also examines the motivations of participants on the site. Interviews via instant messenger were conducted with 23 participants focusing on their perceptions of the Next Stop Design project according to a list of ideal features for online deliberative democratic process and a list of motivations for participation.

Data suggest that Next Stop Design was perceived to be a generally effective online deliberative democratic process, with perceived weaknesses concerning the facilitation of the project through public voting and the equality of participants on the site in light of apparent voting fraud in the competition. Findings also suggest that participants were motivated to participate in the project because they saw an opportunity to advance their careers, they had fun, they learned new skills and knowledge, and they saw the project as an opportunity for creative self-expression. Participants were also motivated to participate because the Web site was appealing, usable, and had a low barrier to entry, and participants offered constructive feedback to improve the process as a whole.
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To Contribute to a Collaborative Effort and To Express Oneself

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CHAPTER 1

INTRODUCTION

In this dissertation, I examine the emergence of an online business model called crowdsourcing and situate it in the context of public participation, deliberative democracy, and problem solving. I argue that crowdsourcing is an effective tool for online deliberative democratic processes, a tool that can be used to leverage the collective intelligence of online communities in the service of the public good. To do this, I investigate the Next Stop Design case, a crowdsourcing project designed to test the model in a public participation context for transit planning, specifically in bus stop shelter design. Through online interviews with Next Stop Design participants, I explore the perceptions of the project as an effective online deliberative democratic process and discover what motivated users to participate in the project. Emergent themes from the interviews suggest that Next Stop Design was mostly a success in aligning with the ideals of online deliberative democracy (Noveck, 2003), with some concerns about accountability, equality, and the facilitation mechanism in the project. Themes also suggest that participants were motivated for a variety of reasons, broadly concerning career advancement and enjoyment. I begin this dissertation project with a vignette about an early online participation experiment, as it provides an interesting historical perspective and a conceptual frame for the remainder of this study.
PEN: A Vignette for Online Public Participation

The city of Santa Monica launched the Public Electronic Network (PEN) in early 1989. PEN was the first online network operated by a city government for use by the public, and very quickly the online community at PEN grew to several hundred, and eventually, a few thousand members. PEN was comprised of three components: a database of public notices, hearings, and schedules; a hub for citizens and city officials to exchange e-mails; and a discussion board for citizens to engage in debates about all kinds of issues facing the city. City officials were surprised to see that it was this last component, the public discussion space, that thrived the most, as citizens actively discussed issues of urban planning, development, homelessness, and city services in a kind of ongoing virtual town hall meeting. About “20 to 25 per cent [sic] of PEN usage” came from the use of “public terminals,” such as in libraries, enabling “the voices of the otherwise disenfranchised—including the homeless—[to be] heard by the community” (McKeown, 1991, para. 6). Donald Paschal was a homeless Santa Monican who used PEN to help organize the establishment of a shower, washer, and locker facility for the city’s homeless in the early 1990s. Paschal reflected that the most remarkable thing about the PEN community is that a City Council member and a pauper can coexist, albeit not always in perfect harmony, but on an equal basis. . . . I do not believe that I could have [helped establish the shower, washer, and locker facility] without participation in PEN. If this experience means anything, it is that throughout my battles, I was considered human. To me that is important. On the streets, one is looked on with varying measures of pity, disgust, hatred, and compassion, but almost always as something alien, from another world.

But on PEN, I have been helped, rebuffed, scorned, criticized, considered, and in most cases, respected—as a human. PEN is a great equalizer. Eventually. There are no homeless or homed unless we say we are. We are not one happy family; like most families, we squabble. On any topic, no one can accuse PENners of
agreeing fully. But we are communicating, and that is a start. (Schmitz, Rogers, Phillips, & Paschal, 1995, pp. 38-39)

Ultimately, PEN was credited with forging connections between Santa Monica’s citizens—homeless and otherwise—and its elected officials that eventually resulted in the establishment of additional facilities and services for the homeless, the blocking of a key waterfront hotel development in town, and other substantial public decisions (Schmitz et al., 1995).

PEN was soon heralded as a model for future deliberative democratic processes online, a discourse emerging that dreamed of utopian democratic possibilities through computer networks where everyday citizens would be empowered to stake a claim in the administration of government (Flichy, 2001/2007; Van Tassel, 1994). On the other hand, PEN, like many other municipal systems that emerged shortly thereafter, had its own troubles. PEN’s designer, Ken Phillips, noted that the goal of PEN was “not to decrease bureaucracy but to increase communication,” and many Santa Monica city officials “grumble[d] that they spen[t] too much of their time answering PEN messages from electronically loquacious citizens” (“The PEN is Mighty,” 1992, p. 96). While PEN seemed to bring more voices, more diverse voices, and perhaps qualitatively more robust citizen input to bear on local issues, then, it may not have actually been more administratively efficient. In addition to the volume of messages requiring staff attention, Santa Monica Councilmember Kevin McKeown (1991) believed the real “dark side” of PEN was the persistence of “flaming” (personal attacks in online communities by anonymous users) and sexual harassment and degradation of women in the network by anonymous (male) users (para. 15-22). Indeed, some politicians in Santa Monica eventually stopped participating in PEN altogether, “citing the rudeness of many of their
correspondents” (“The PEN is Mighty,” 1992, p. 96). PEN’s discussion capabilities were restructured in 1993 to limit the frequent and lengthy unmoderated posts by some flamers in the community, a controversial decision that some PENners claimed restricted free speech (Schmitz et al., 1995, pp. 40-41).

PEN is a useful starting point for a discussion of deliberative democracy, e-governance, and public participation online. PEN seemed a robust cocktail of all that is good and potentially bad about taking public decision-making online. From censorship and flaming to empowering the marginalized and connecting everyday citizens to the process of governance, PEN opens many conversations about the effectiveness of deliberation, the design of online discussion spaces, and the pace of public input in a digital era.

Ultimately, I believe in the potential for online democratic processes, the power of collective intelligence aggregated through the medium of the Internet, and the possibility that, when carefully designed and managed, the Internet can be used to leverage the collective intelligence of online communities for the public good. Specifically, my ultimate claim is that crowdsourcing, an online distributed problem solving and production model, is one such method for conducting effective online public participation programs to solve problems in the domain of urban planning, and that crowdsourcing should be embraced by governments to improve their public participation processes.

Crowdsourcing as an Online Public Participation Tool

Crowdsourcing is an online, distributed problem solving and production model. It has largely been used by businesses since about 2000 with much success. It works by challenging an online community, through an open call, to propose solutions and designs
to an organization’s problem. The online community then generates solutions and, in some cases, also vets the solutions of peers in order to produce a single best idea for the organization. With a team of researchers, I embarked on an effort to translate this model for a different kind of problem solving environment. I sought to use the logic of crowdsourcing to replicate a public participation process online. Like PEN, this project was designed to engage the public with one aspect of the business of governance, public participation for public decisions.

The project we developed, Next Stop Design, asked an online community to submit bus stop shelter designs and vote on the designs of peers in the summer and fall of 2009. The project generated a lot of participation, but to assess the effectiveness of the project as an online deliberative democratic tool, I interviewed a sample of participants for their perceptions of the project and why they chose to participate. My study was driven by two broad research questions:

1. Did participants in the Next Stop Design project perceive crowdsourcing as an effective form of online participation?

2. Why did individuals participate in the Next Stop Design project?

**Overview of the Dissertation**

This dissertation project unfolds as a typical qualitative study. In Chapter 2, I present the conceptual framework for the project. I connect deliberative democratic theory and empirical research from public participation programs to make a general claim about the fundamental alignment between public participation in urban planning contexts and the goals of deliberation. In both deliberation and public participation in urban planning, a group decision is sought through ideation and dialogue that ideally satisfies
all stakeholders affected by the decision. Then, I present a discussion of the features of new media technologies, specifically the Internet, and how these features enable a form of collective intelligence and crowd wisdom to emerge in participatory online spaces. The temporal flexibility, reach, anonymity, and converged technological platform of the Internet make possible the aggregation of millions of minds across the globe and channel that creative intellect for specific purposes. It is an articulation of these many technological forces now that enables this kind of productive coordination. Following an examination of the literature on online deliberation, I assert that crowdsourcing may be an appropriate fit for online deliberative projects, as a new way of conducting public participation programs with new media. I explain the four general types of crowdsourcing and emphasize the peer-vetted creative production type as embodying the ideals of public participation. This crowdsourcing type charges users with both generating ideas in response to a challenge and sorting through the ideas of peers to select the idea the market will support. Beth Simone Noveck’s (2003) 11 ideal features for online deliberative democratic processes provide a functional heuristic for assessing the effectiveness of Next Stop Design as an online deliberative project, and I enumerate those features in some depth. The second half of Chapter 2 focuses on uses and gratifications theory and the literature on motivations of individuals online. In many decades of theory and empirical research on motivations, many contributions to the literature have focused on descriptive typologies and the continued distillation and fragmentation of motivational categories. In the scope of uses and gratifications in the online environment, a general consensus emerges concerning motivational categories. I put forth nine broad
motivational categories for online participation that I use in my interviews with Next Stop Design participants.

Chapter 3 details my methodological approach to this study. I situate this study in the landscape of applied communication research in the critical tradition. I discuss the creation of the Next Stop Design project as a site for study as a part of a critical media design approach to research. I believe that critical media design encapsulates the articulation of applied communication research, critical inquiry, and the rapid advances in new media technology. Critical media design is an approach to research that is focused on applied research studies undertaken with an eye toward critical theory through the original construction of digital media goods. These goods become research sites in an ongoing, iterative process of creation and critique. Next Stop Design was created with this research approach in mind. Next, I describe the Next Stop Design research site in some depth, providing basic use data of the site and basic outcomes from the competition itself. Next Stop Design was a Web site focused on a bus stop shelter design competition. Design submission was free, and users on the site submitted and voted on designs. The competition ran for 4 months in 2009, drew thousands of visits to the site, registered nearly 3,200 users, and hosted 260 bus stop designs, ultimately producing a set of international winners through peer voting. Finally, I discuss the issues surrounding online interviewing with instant messenger and how this study was designed. Participants from Next Stop Design were interviewed through instant messenger programs about their perceptions of the project as an effective online deliberative democratic process, as well as about their motivations for participation.
Chapter 4 presents analysis and discussion of the data generated from the interviews with participants, with several transcript excerpts. The 23 participants interviewed for this study largely found Next Stop Design to align with Noveck’s (2003) ideal features for online deliberative democratic process, with some exceptions. Concerns about the effectiveness of the project in terms of deliberative democracy related to anonymity on the site, equality between participants, and the facilitation mechanism used in the competition. Most notably, cheating occurred in the competition, which compromised participants’ confidence in the site’s ability to maintain an equal, fair process through online public voting. Motivations data indicated that participants were driven to participate on the site because it was a fun experience, it offered a chance to advance their careers, they learned new skills through participation, and it was an opportunity to express themselves creatively. Perhaps the most valuable findings in the study were that participants were significantly motivated to participate based on the appealing design and usability of the site, and that participants offered helpful feedback for how to improve the process as a whole alongside their criticisms. In other words, participants seemed eager to engage in the refinement of the very new media tool investigated in this study.

Chapter 5 concludes this dissertation project with a summary of findings from the study. Also included is an examination of the limitations of the study and suggestions for future research in this vein. One limitation included language barriers for international participants, especially given an English-only, American-focused competition site and interviews only offered in English. The competition drew a large percentage of visitors, registered users, and designs from outside the U.S. and even beyond other primarily
English-speaking countries. Finally, I close with a list of guiding principles for practitioners intent on using crowdsourcing for participation in their organizations, a handy statement of tips and advice for those most likely to be concerned with implementing crowdsourcing in the future. It is important that a study that is part of a critical media design research approach be made accessible and useful to nonscholars. I offer these concluding points as a beginning to a toolkit for practitioners and governments eager to crowdsource.
CHAPTER 2

LITERATURE REVIEW

In this chapter, I present the conceptual framework underpinning the research questions presented in Chapter 1. First, I examine the fundamental theories driving deliberative democracy, followed by a section detailing public participation in urban planning. Taken together, it would seem that participation programs in the domain of urban planning are predicated on the notion of deliberation. Next, I present several features of new media technologies, such as the Internet, that come to bear on the potential for deliberation online. Then, a discussion of collective intelligence, crowd wisdom, and problem solving follows, and specific literature on online deliberation supports this discussion. Arguments counter to the efficacy of deliberative democracy in the digital era, such as those put forth by Australian media theorist Ned Rossiter (2006), set up my argument for crowdsourcing as an appropriate deliberative model for online engagement going forward. Ultimately, I employ Beth Simone Noveck’s (2003) recommendations for designing effective deliberative processes online to determine if participants at Next Stop Design perceived the project as an effective model for public participation.

Next, I present a number of crowdsourcing cases classified into a typology, revealing the diverse ways crowdsourcing ventures can be executed for different problems and contexts, but all within a guiding definition. Crowdsourcing is a mediated
process, and thus uses and gratifications theories are useful for understanding why these online communities—“crowds”—participate in crowdsourcing arrangements. I discuss the larger concept of participatory culture, as well as examine the many reasons why individuals use and desire interaction with new media. Across several crowdsourcing cases, a body of motivations data has emerged. I detail these known motivators in crowdsourcing arrangements and ultimately conclude that motivations for participation in crowdsourcing are complex and vary, but several motivators occur across many contexts. I conclude this section by synthesizing the research on motivations in crowdsourcing specifically, and participatory online culture generally, into nine broad motivational categories in order to operationalize the concepts in RQ2 for the study.

Next Stop Design provided a unique opportunity to evaluate the effectiveness of crowdsourcing in a public participation context, as well as assess why the crowd participated in the project. The two large theoretical discussions in this chapter develop a structure within which to execute the study.

**Deliberative Democracy**

The tenets of deliberation and democracy are rooted in a very long history of political thought, “traced to Dewey and Arendt and then further back to Rousseau and even Aristotle” (Bohman, 1998, p. 400). Yet, it is the use of “deliberative democracy” that appeared in the early 1980s (Bessette, 1980) that tipped off an intense scholarly interest in the concept that continues just as vibrantly today.

Many versions of deliberative democratic theory have emerged in the recent proliferation of research on the topic, and there have been review articles dedicated to organizing these diverse interpretations of the theory in recent years (Bächtiger,
Niemeyer, Neblo, Steenbergen, & Steiner, 2010; Bohman, 1998; Chambers, 2003; Freeman, 2000; Thompson, 2008). Synthesizing the contributions of the “main advocates of deliberative democracy (Habermas, Rawls, Joshua Cohen, Michelman, Sunstein, Gutmann, Thompson, and Estlind, among others),” Freeman (2000) provides a neat, if lengthy, definition of “the primary features of the political ideal of deliberative democracy”:

Conceived as an ideal of political relations, a deliberative democracy is one in which political agents or their representatives (a) aim to collectively deliberate and vote (b) their sincere and informed judgments regarding (c) measures conducive to the common good of citizens. (d) Political agents are seen and see one another as democratic citizens who are politically free and equal participants in civic life. (e) A background of constitutional rights and all-purpose social means enable citizens to take advantage of their opportunities to participate in public life. (f) Citizens are individually free in that they have their own freely determined conceptions of the good, and these conceptions are publicly seen as legitimate even though they are independent of political purposes. Moreover, (g) free citizens have diverse and incongruous conceptions of the good, which are constitutionally protected by basic rights. Because of this diversity (h) citizens recognize a duty in their public political deliberations to cite public reasons—considerations that all reasonable citizens can accept in their capacity as democratic citizens—and to avoid public argument on the basis of reasons peculiar to their particular moral, religious, and philosophical views and incompatible with public reason. (i) What makes these reasons public is that they are related to and in some way advance the common interests of citizens. (j) Primary among the common interests of citizens are their freedom, independence, and equal civic status. (p. 382)

Deliberative democracy is a normative theory that aims to prescribe ideals for which democratic practice can strive. It runs counter to individualistic conceptions of democratic participation and focuses more on “talk-centric” forms of participation emphasizing the common good, vibrant discussion among equals, and consensus (Chambers, 2003, p. 308). Rather than aggregating the votes of self-interested individuals to declare a majority opinion, deliberative democracy strives for discussion among individuals about common interests. Voting can accompany effective deliberative process
as a way to define an outcome of a deliberation, but the difference between deliberation-informed voting and self-interested, nondeliberative voting is that individuals consider these common interests in the former kind. Or, as Chambers (2003) notes, voting “is given a more complex and richer interpretation in the deliberative model than in the aggregative model” (p. 308).

Mansbridge (2010) extends this discussion, and ultimately blurs this distinction, by acknowledging that all individuals, no matter their commitment to the common good, are inherently to a degree self-interested. She argues first that a diverse citizenry will always produce “irresolvable conflicts” and thus “deliberatively authorize certain nondeliberative democratic mechanisms,” such as voting (Mansbridge, 2010, pp. 64-65). And second, Mansbridge urges disclosure of self-interest in deliberative democracy because it “reduces the possibility of exploitation and obfuscation, introduces information that facilitates reasonable solutions and the identification of integrative outcomes, and also motivates vigorous and creative deliberation” (pp. 72-73). In other words, the presence of specific individuals’ personal interests in a deliberation is necessary in the first place to map the contours of the public good. Also, in the end, if a vote or other nondeliberative mechanism occurs after a considered deliberation, at the very least, minority parties in a conflict will more likely accept the outcome as legitimate than they would in an aggregative voting scheme involving no prior deliberation.

Some scholars attempt to shift the focal point of deliberative democracy away from rational consensual outcomes and toward the agonistic values of productive conflict itself. Mouffé’s (2000) conception of the agonistic democracy assumes the impossibility of rational consensus, since conflict among diverse citizens will both always exist and
will likely involve emotional (nonrational) bases. Knops (2007) subsumes agonism under the umbrella of deliberative democracy, but Gürsözlü (2009) points out that this is a gross misreading of Mouffe. Agonistic democracy, Gürsözlü (2009) states, is focused on the emergence of differing opinions through conflict, but pays no attention to rational consensus. On the other hand, rational consensus is the chief aim of deliberative democracy, and agonism and deliberation ought to be seen as very different interpretations of the value and purpose of diversity and debate.

Theoretical development in the way of deliberative democracy has outpaced empirical research, and there is some claim that theories and empirical research about the subject are disconnected (Nino, 1996; Thompson, 2008). The existing empirical findings are mixed, but some core trends are emerging from a variety of studies on the practice, potential, and efficacy of deliberation. Delli Carpini, Cook, and Jacobs (2004) enumerate these trends in the empirical literature:

1) “enough Americans engage in public talk” and seem equipped and willing to engage in democratic deliberation;

2) democratic deliberation “can lead to some of the individual and collective benefits postulated by democratic theorists”;

3) the “Internet may prove a useful tool in increasing [deliberation’s] use by and utility for citizens”; and

4) “the impact of deliberation and other forms of discursive politics is highly context dependent.” (p. 336)

These first two trends indicate that there may be motivation among citizens to accept democratic deliberation and that deliberation may actually improve upon other forms of
democratic participation. The third trend above hints at the potential for new media technologies to enlarge the capacities of deliberation, which I will discuss later in this chapter. The fourth trend reminds us that there is no perfect recipe for deliberative democracy, and that each instance requiring public input must be individually considered according to its specific parameters. Landwehr (2010) thinks understanding the “context conditions for successful and democratic deliberation . . . remains the most important challenge for deliberative theory and deliberative politics” (p. 120). This point also speaks volumes to the practical importance of designing and moderating deliberative spaces and opportunities according to a given issue and citizenry. Some scholars in recent years have even begun to propose practical implementations, blueprints, and policies for deliberative democracy, following the trajectory of theory and empirical research. Leib (2004), for instance, proposes an entirely new fourth branch of government in the U.S.—a popular branch—that would bring panels of citizens into deliberative engagements to craft policy and respond to administrative needs.

Public Participation in Urban Planning

I turn now to a specific context where deliberative democratic principles are attempted in practice: public participation programs for urban planning. A robust body of planning literature has acknowledged the benefits of public participation in planning processes (Creighton, 2005; Forester, 2006; Hou & Kinoshita, 2007; Pimbert & Wakeford, 2001). At most, public participation can be seen as a logical extension of the democratic process in more local, direct, deliberative ways (Pimbert & Wakeford, 2001). And at the very least, involving citizens in the planning process helps ensure a plan that will be more widely accepted by its future users (Brody, Godschalk, & Burby, 2003;
Burby, 2003; Miraftab, 2003). As Crewe (2001) found in an analysis of citizen participation in the Boston Southwest Corridor project in the 1970s and 1980s, “[t]he more designers value the input of citizens, the more appropriate their designs will be for the users concerned” (p. 439). Extending this notion, Fiskaa (2005) posits that “[t]he purpose of public participation is of course to obtain better plans, meaning that they are well accepted by most, and therefore easier to carry out” (pp. 160-161).

Other benefits for public participation in urban planning involve the valuing of nonexpert or nonmainstream knowledge brought into the creative problem solving process of planning. Participation is the act of creating new knowledge, contributing new perspectives to the planning process, and diffusing knowledge to others in the process (Hanna, 2000). Van Herzele (2004) found that inclusion of nonexpert knowledge was beneficial to the planning process in general, since the perspectives of individuals outside of the professional bubble of urban planning can (re)discover creative solutions that could work in a specific local context. To enlarge the discussion to the realm of innovation research as well, several studies (Jeppesen & Lakhani, in press; Lakhani, Jeppesen, Lohse, & Panetta, 2007; von Hippel, 2005) have found tremendous success when non-experts and those on the margins of a discipline engage in scientific problem solving and product design, often with solutions superior and more cost-effective than traditional research and development programs. Corburn (2003) urges that “local knowledge should never be ignored by planners seeking to improve the lives of communities experiencing the greatest risks” especially (p. 420). Corburn (2003) goes on to define local knowledge and its purpose in the public planning process. Adapted from Corburn (2003), local knowledge is:
• Knowledge of specific characteristics, circumstances, events, and relationships, as well as important understandings of their meaning, in local contexts or settings;

• Often acquired through life experience and is mediated through cultural tradition;

• Rarely a hunch or spontaneous intuition but rather evidence of one’s eyes tested through years if not generations of experiences; and

• Legitimated through public narratives, community stories, street theater, and other public forums, as opposed to professional knowledge which is generally tested through peer review, in the courts, or through the media. (p. 421)

It is immodest to think that only professional planners can develop planning solutions, and perhaps more so to think that experts can identify precisely which and how many nonexperts would be of value to a project. Local knowledge and nonexpert knowledge adds the perspective of the future user of a designed space and the insights about environment and place that the planning discipline might never have approached or might have already forgotten (Burby, 2003; Laurian, 2003).

Urban planners continually struggle to enlarge the participation process, to maximize and diversify stakeholder input in the designing of solutions for urban problems. In theory, making participation processes more inclusive and representative makes sense and resonates with the principles of deliberative democracy. In practice, though, the facilitation of a public planning meeting has its challenges for spurring participation and for drawing out creative solutions from the future users of public spaces (Campbell & Marshall, 2000; Carp, 2004; Hibbard & Lurie, 2000; Hou & Kinoshita, 2007; Innes, Connick, & Booher, 2007).
In fact, a counter body of literature has emerged that challenges these broad, rosy promises of public involvement in planning, citing local exceptions and small-scale public participation failures based on specific cases and long-range studies. These mixed results align with the mixed results from empirical studies in deliberative democracy, such as Pelletier, Kraak, McCullum, Uusitalo, and Rich’s (1999) and Scholl’s (2001) studies. Ryfe (2005) and Delli Carpini et al. (2004) offer two syntheses of these mixed empirical findings in deliberative democracy cases. In urban planning, for example, Abram and Cowell (2004) argue that success in public participation may be culture-specific, noting that Norwegians are more apt to be involved in public planning due to a general expectation of transparency in government and due to Norwegians’ generally high rates of activity in political parties. Likewise, some cultures have differing levels of transparency in government and various barriers of public participation in government processes (Alfasi, 2003).

Lane (2003) challenges the inherent democratic potential of local knowledge, particularly when processes fail to incorporate local knowledge meaningfully. Nance and Ortolano (2007) argue that success in public participation may be project-specific, noting that public participation in a Brazilian urban sanitation plan had mixed results relating to performance of the plan. Furthermore, while public participation can be a conscious way to incorporate the ideas and feelings of minority groups typically underrepresented in policymaking, Beebeejaun (2006) warns of inclusion of ethnic groups in particularist ways that separate those minority groups from the mainstream. Further still, tokenism and the reinforcement of essentialist categories of difference in conspicuous inclusion of
minority representation may be counterproductive to the greater project of interrogating power inequities in a community (Beebeejaun, 2006).

Brody (2003) highlights the relative absence of empirical evidence of success in public participation as well, pointing out that “[h]igh levels of participation may increase conflict by having disputing parties at the negotiating table” and “frustrate planners by slowing down the decision-making process” (pp. 409-410, emphasis added). It is not only planners who experience frustration in these instances. A number of empirical studies in deliberative democratic process confirm that individuals experience more anxiety, frustration, self-doubt, and regret following deliberation than they felt before deliberation (Button & Mattson, 1999; Cook & Jacobs, 1999; Holt, 1999; Kimmelman & Hall, 1997).

Adding to this general qualifying of the potential of public participation in planning, Burby (2003) reminds us that “planners themselves can stifle participation by the choices they make about public involvement” (p. 34). Specifically, the ways planners conduct meetings and inject their own wit and personal facilitation style may work to either limit or enhance planning subjects’ impact on material outcomes (Carp, 2004). The very presence of special interest groups in the planning process, who show up to planning meetings representing the interests of some facet of the public, may intimidate the average citizen with elaborate charts, maps, empirical evidence, and expert advice, thus deterring future involvement by nonexperts in the community (Hibbard & Lurie, 2000). Nonverbal communicative actions and unrelated small talk by various citizens in the actual spaces of public meetings also work to “script” the power grabs that occur during the actual public participation segments of planning meetings (Campbell & Marshall, 2000). Furthermore, recent studies from Hou and Kinoshita (2007) and Innes et al. (2007)
found that the degree of informality employed during the public participation process affected the ways in which citizens were able to contribute to the development of the plan and see themselves as effective actors in the solving of problems.

Forester (2006) reminds us that “[e]asy to preach but difficult to practice, effective public participation in planning and public management calls for sensitivity and technique, imagination and guts” (p. 447). These many articles that caution against the optimistic view of deliberation in public participation could be collectively seen as a series of exceptions to the rule, studies hinging on narrow case studies where a public involvement program was soured by specific interpersonal dynamics or exceptional local circumstances. I believe, however, these cases and the literature illustrate simultaneously that public participation is an important thing to strive for in a public process and that face-to-face public participation is inherently an imperfect process.

Traditional public participation methods should not be devalued, for these methods have generally served us well in the past, and no method is perfect. But when we consider the medium of the Internet, for instance, where anonymity for users is available and where body language, identity politics, and interpersonal power dynamics are absent or changed, we can begin to ameliorate some of the common pitfalls of public participation that this body of counter literature on public involvement identifies. Simply put, with so many shortcomings in executing the face-to-face public participation component of a planning project, we should begin to think beyond the bounds of what might constitute public involvement in the first place and begin to think beyond face-to-face means, to think about digital possibilities.
The Medium of the Internet

The Internet enables a kind of networked, creative thinking, and encourages the mind to wander down winding paths to unknown mental explorations. Take, for instance, how hypertext can lead one down a rabbit hole of browsing. Other aspects of the Internet that make it an ideal medium for facilitating creative participation include its temporal flexibility, reach, anonymity, interactivity, and its ability to carry every other form of mediated content. The Internet is an instant communications platform, where messages, and thus idea exchange, can travel so fast along its channels that the medium works in effect to virtually erase the issue of time, accelerating creative development. Furthermore, the Internet has a more or less global reach, or it least it can have a thoroughly global reach. This means that communication can take place between people in different places rapidly. Coupled with the virtual erasure of time, this global character of the Internet works to also erase space. Carey (1989) first best pondered the cultural transformations and the societal capabilities of communications technologies unmoored from time and space, noting that inventions like the telegraph that accomplished this erasure worked to unite nations in common cultural visioning.

In contrast to the speed of the Internet is the fact that the Internet is at the same time an asynchronous mode. That is, online bulletin board systems and similar applications enable users to post commentary and ideas to a virtual “location” at one point in time, and though the speed of the Internet tends to make users hasty in their online posts, asynchrony allows other users to engage those thoughts at much later points in time in measured deliberation. Much like the leaving and taking of notes on a bulletin board in a town square, the Internet can foster a sense of ongoing dialogue between
members of a community without those members having to be present at the same time (Ostwald, 1997/2000). This capability of the Internet is already being realized in some urban planning projects, as posting podcasts and meeting minutes on planning project Web sites is an exploitation of the Internet’s asynchrony and virtual permanence, particularly if these kinds of project Web sites are coexistent with online bulletin board systems.

Planning decisions are not about the will of the simple majority. They are about the ways in which communities provide qualitative commentary on how they want to see their future built environment. In an online context, individuals make qualitative input available primarily through online bulletin board systems and other modes of asynchronous communication. Ideally, according to the principles of deliberative democracy, individuals incorporate discussion and exchange as they develop a series of individual solutions to contribute to a commons. The asynchronous nature of the Internet is important for this development. Taken together, the speed and asynchrony of the Internet make for a temporal flexibility, the medium conforming to the needs and uses of the particular user, converging different speeds and usage patterns together in a collaborative project online that may be either synchronous (“real time”) or asynchronous.

Furthermore, the Internet is an anonymous medium. Users are able to develop their own online identities largely on their own terms, or they can choose to remain anonymous entirely. In a chat room or bulletin board system, for example, people can develop whole new personas or design entirely differently-bodied avatars to represent themselves and their interests. In line with much of the scholarly literature on nonverbal
communication, Campbell and Marshall’s (2000) discovery that people’s body language, positioning in the space of a room, and small talk work to “script” the ensuing power dynamics of a planning meeting is relevant here. In an online environment, people are free to contribute to online discussions and the vetting of ideas without the burden of nonverbal politics. That is to say nothing of the very real power inequities at play with embodied forms of difference, such as race, gender, and (dis)ability, inequities buttressed many times over by empirical research in communication, sociology, health, psychology, and other disciplines. The medium of the Internet can work to liberate people from the constraints of identity politics and performative posturing by endowing users with the possibility for anonymity in participatory functions (Sotarauta, 2001). They can become, as Suler (2004) claims, “disinhibited” and expressive.

Finally, the Internet is an interactive technology and a site of convergence, where all other forms of media can be utilized. Rather than the simple transmission mode of information native to “older” forms of media (e.g., television, radio, newspaper) and much policy, the Internet encourages ongoing cocreation of new ideas. Content on the Internet is generated through a mix of bottom-up (content from the people) and top-down (content from policy-makers, businesses, and media organizations) processes, as opposed to solely a top-down model. It would seem that public participation programs folded into urban planning processes try to achieve this meeting in the middle of ideas from the “bottom” (the people) and from the “top” (the administration), but as discussed below, this stilted format for idea exchange—idealized in deliberative democracy—may be outdated in the digital era. To some, the Internet has many shortcomings, including the ways in which the Internet may alienate us from our neighbors interpersonally and the
ways some companies seek to position Internet users as consumers ripe for profit (Bugeja, 2005; Putnam, 2000). In a “Web 2.0” era of increased content creation, though, Internet users are becoming particularly savvy at broadcasting their own ideas, uncovering buried information, and remixing previous ideas and content into new, innovative forms. Internet users are potentially problem solvers, are potentially creative. We should turn to the Internet to transform the public participation process, to enlarge our narrow perspective on how citizens actually participate in democracies today (T. C. Mack, 2004).

**Collective Intelligence, Wise Crowds, and Problem Solving**

Another capability of the Internet is its ability to bring the kernels of wisdom from individual users together for a single purpose. If one reason for valuing local or non-expert knowledge is that new ideas may emerge that might never have been thought of within the bounds of the profession and the bureaucracy of the firm, then the question is how best to maximize this input. Presumably, a scaling-up of the public involvement process and a more concerted effort to recruit nonexperts into the planning process would do the trick, but such actions are costly and labor-intensive. On the Internet, though, the unidentified, nonexpert talent is out there, accessible through its seemingly infinite scaled-up platform. The Internet boom in the mid-1990s was related to this vast landscape of diverse users. Narrow niche businesses sprang up in the dot-com gold rush, eager to use the reach of the Internet to attract a collective of shoppers with the most obscure tastes and needs. There was, of course, a limit to what the market would support in online micro-niche commerce, as was seen in the 2000 dot-com crash (Flichy, 2001/2007). Yet, the lesson here is that if businesses gambled heavily on the Internet’s
reach to deliver them enough customers pulled from the digital woodwork, then planners can and should seek latent talent on the Internet for their projects. This might better be understood by what Anderson (2006) calls a “long tail” effect.

At the time of the Web’s awakening, Lévy (1995/1997) wrote:

> It has become impossible to restrict knowledge and its movement to castes of specialists. . . . Our living knowledge, skills, and abilities are in the process of being recognized as the primary source of all other wealth. What then will our new communication tools be used for? The most socially useful goal will no doubt be to supply ourselves with the instruments for sharing our mental abilities in the construction of collective intellect of imagination. (p. 9)

Since “no one knows everything, everyone knows something, [and] all knowledge resides in humanity,” we must consciously adopt the technologies and methods that harness this talent (Lévy, 1995/1997, pp. 13-14). Lévy was an optimist. He called this far-flung genius *collective intelligence*, a “form of universally distributed intelligence, constantly enhanced, coordinated in real time, and resulting in the effective mobilization of skills” (Lévy, 1995/1997, p. 13). His logical choice to harness this intellect is the Internet, and for reasons that resonate with Rossiter’s (2006) argument for a new, networked democratic process:

> Cyberspace designates the universe of digital networks as a world of interaction and adventure, the site of global conflicts, a new economic and cultural frontier. There currently exists in the world a wide array of literary, musical, artistic, even political cultures, all claiming the title of “cyberculture.” But cyberspace refers less to the new media of information transmission than to original modes of creation and navigation within knowledge, and the social relations they bring about. . . . It is designed to interconnect and provide an interface for the various methods of creation, recording, communication, and simulation. (Lévy, 1995/1997, pp. 118-119)

Given the will to act, problem solving with collective intelligence and networks can be scaled-up to address even global concerns (Ignatius, 2001). Several modes of
technology—many of them Internet-based—already exist to encourage global communication and problem solving (Masum & Tovey, 2006).

An interesting thing happens when enough talent becomes collected in efficient ways, even without the aid of the Internet to harness all ideas: people can become collectively smarter. James Surowiecki, in his book The Wisdom of Crowds, examines several cases of crowd wisdom at work, where the very success of a solution is dependent on its emergence from a large body of solvers. Based on several empirical investigations, Surowiecki (2004) finds that “under the right circumstances, groups are remarkably intelligent, and are often smarter than the smartest people in them” (p. xiii). This wisdom of crowds is derived not from averaging solutions, but from aggregating them:

After all, think about what happens if you ask a hundred people to run a 100-meter race, and then average their times. The average time will not be better than the time of the fastest runners. It will be worse. It will be a mediocre time. But ask a hundred people to answer a question or solve a problem, and the average answer will often be at least as good as the answer of the smartest member. With most things, the average is mediocrity. With decision making, it’s often excellence. You could say it’s as if we’ve been programmed to be collectively smart. (Surowiecki, 2004, p. 11)

Scott E. Page (2007) extends Surowiecki’s speculations on crowd wisdom to make a more sophisticated claim about diversity in problem solving environments in general. In some problem solving situations, the process benefits by having a number of individuals from cognitively diverse perspectives offer their solutions, even if those individuals are not themselves experts (Page, 2007). Additionally, Terwiesch and Xu (2008) found that “ideation problems” are suited for broadcasting to an online base of solvers. This means that issues involving the generation of unique designs and ideas are good candidates for opening up to an online community of individuals who might have something to say about the issue.
What may be the most promising about the Internet in a democratic sense is that not only does the Internet foster communication and collaboration among citizens, but if designed properly, a deliberative process online can be directed in such a way as to leverage collective intelligence from many participants for the purpose of solving a distinct problem. Terranova (2004) writes that the Internet is an ideal technology for distributed thinking because the Internet is “not simply a specific medium but a kind of active implementation of a design technique able to deal with the openness of systems” (p. 3). Fischer (2002) echoes this sentiment. That is, online deliberative processes need not just be “talk-centric,” but they can be purposefully designed to solve problems presented by the state. I turn now to a discussion of online deliberation and then to democracy in organized networks before making my claim that one such participatory model—crowdsourcing—fulfills this specific problem solving need.

**Online Deliberation**

Bringing principles of deliberation and participation to an online setting seems a natural step in the evolution of these theories and technologies. Experiments in online deliberation have focused on replicating, supplementing, or even replacing the function of face-to-face democratic governance in a mediated arrangement. The understanding in these online deliberation ventures is that everyday citizens feel alienated from the process of democracy (and indeed also from their elected representatives), and the Internet may motivate citizens and bring their input back into the system (Macintosh, 2006). The features of the Internet are instructive here: the reach of the Internet allows more and far-flung citizens to engage in the democratic process; citizens can come and go in the process at their own convenience and participate at their own pace due to the temporal
flexibility of the Internet; anonymity afforded by the medium may encourage citizens to express their opinions freely and without fear of retribution; and the interactive and media-converged platform of the Internet allows for rich, cognitively engaging contributions to the process of democracy.

Despite the promise of radically transforming governance with new technologies, though, Francis McDonough (as cited in Noveck, 2003) notes that there have so far been just “six generally-accepted phases of e-government:

1. providing information;
2. providing online forms;
3. accepting completed online forms;
4. handling single transactions;
5. handling multiple, integrated transactions; and
6. developing intergovernmental projects that require the restructuring of the government to allow the delivery of new integrated services” (p. 46).

In other words, the potential for the Internet to turn citizens into creative collaborators with government rather than just users of government services online has mostly not yet been realized.

An anthology was published in late 2009 that developed out of a series of conferences on online deliberation (Davies & Gangadharan, 2009). Its chapters, from leading thinkers in the field, come together in much the same way literature on deliberative democracy in general has come together over the years. That is, the contents of this anthology offer a collection of mixed results, context-specific lessons learned from online deliberation, and idealistic visions for online deliberation’s future. Perhaps the
most valuable take-away section of the anthology—and indeed this claim could be
applied to much of the body of literature on online deliberation—is the part focused on
the design of online deliberation tools. Attempting to synthesize the whole of the
literature on online deliberation, Gangadharan (2009) notes that

online deliberation can be understood as a sociotechnical system that is
coordinated or managed by a government institution, news outlet, civil society
organization, corporation, educational body, or other institution (or set of
institutions). Apart from the question of who manages such a project or endeavor,
this level of online deliberation entail choices about the goals of deliberation, the
software used to achieve those goals, the platforms that host the online
deliberation experience, the modality of the user experience, the way in which
participants are recruited, the types of participants being targeted, the context and
scale of the user experience, the evaluation of deliberative goals, and the
economics and managerial style of the deliberative endeavor. (pp. 340-341)

Importantly, then, online deliberation systems and tools are hierarchically
managed, have goals for participants, and are sociotechnical arrangements, meaning there
is an emphasis on the ways humans and technologies work together toward these goals
(as opposed to technologies operating autonomously or artificially and as opposed to
humans merely using technologies to facilitate typical face-to-face processes).
Fundamentally, online deliberative practices weave deliberative democratic principles
together with the collaborative and communicative capabilities of new media
technologies under the direction and authority of government institutions. Importantly, all
of this is possible through the design of online deliberation tools from the outset (Noveck,
2003).

Deliberative democracy enjoys “subjective legitimacy” that “consists of the
generalized belief of the population in the moral justifiability of the government and its
directives” (Nino, 1996, p. 8). In other words, the views of the people participating in a
deliberative democracy work to legitimate a regime’s design and function through
continued participation. Thus, to appraise a deliberative democratic tool or process, one could gather input from citizens and compare attitudes about the process against a set of normative ideal features of deliberative democracy.

Legal scholar Beth Simone Noveck wrote in 2003 of the need to design truly deliberative spaces in cyberspace. Her call for better processes and systems to improve governance and democracy in this article was later echoed in a book-length treatment (Noveck, 2009), and her authority on the topic of e-democracy and her direction of the Peer-to-Patent project landed her an appointment in the Obama Administration as Deputy Chief Technology Officer for Open Government. Her principles for ideal online democratic process are enumerated here as a functional heuristic and provide the concepts for which I operationalize RQ1 in the study.

I use Noveck’s list of ideals for online deliberative democracy in this study, rather than those of another scholar, for three reasons. First, Noveck’s reflections on ideal online deliberative democratic process in light of her involvement with the successful public crowdsourcing project Peer-to-Patent and her role in President Obama’s groundbreaking initiatives in government technology, participation, and transparency make her a leading voice on this issue. Second, she positions her research on deliberative democracy from the standpoint of a lawyer interested in issues of new media technology in governance, and her practical activities in deploying online deliberative democratic tools have informed her theoretical contributions. Her work is that of an active critical media designer, not just a philosopher, so her distillation of ideal features reflects issues of both the theory and practice of online deliberative democracy. Third, and most importantly, her ideal features of deliberative democracy assemble the major topics from
all of the current literature. Chambers (2003), Freeman (2000), Mansbridge (2010), Delli Carpini et al. (2004), and other scholars each write about one or more of the ideal features of deliberative democracy, but Noveck’s (2003) work is arguably the best recent single summary of the literature. She even points out that “[t]hough many theorists extol [deliberative democracy’s] virtues, rarely do commentators define what it actually is and what features comprise a deliberative process,” and then proceeds with defining these “building blocks of deliberation [to] allow us to construct participatory processes” (Noveck, 2003, p. 12). Her comprehensive list of ideals is reflective of the major trends in deliberative democratic theory and functions as an effective heuristic with which to appraise the effectiveness of an online deliberative democratic tool or process.

The reason we have yet to realize the full potential of new media technologies for democratic processes, according to Noveck (2003), is that “[t]he spaces we inhabit in cyberspace currently are constructed around the goals of commerce” and that these “[v]alue choices translate into design choices” (p. 11). That is, because the Internet is a largely privatized technology and many users use the Internet largely for e-commerce and transactional activities, we have come to conceive of this technology as only capable of facilitating those activities and have designed e-government services in that image. To achieve any sort of effective deliberation online, and thus an effective democratic process online, Noveck (2003) offers 11 ideal features. According to Noveck (2003), these processes must be designed to be:

- **Accessible** – “the space in which [deliberation] occurs—whether physical or virtual—has to be available to as wide a range of participants as possible”;}
• *Free of censorship* – “the space needs to safeguard freedom of thought and expression”;  
• *Autonomous* – “the process must not treat [participants] as passive recipients of information, but as active participants in a public process”;  
• *Accountable and relevant* – “members of a community engage with one another in accountable and reasoned public discourse” and “cannot be anonymous to one another”;  
• *Transparent* – “the structure and rules of the space must be public so that citizens know who owns and controls the space, whether monitoring is taking place, and the origin of any information contributed to the discussion”;  
• *Equal and responsive* – “[i]n the constructed space, all participants must be equal players with like opportunities for access and voice” and “[t]he architecture cannot privilege one group over another”;  
• *Pluralistic* – “[r]ules or technology can be enlisted to regulate the space for deliberation” so that “viewpoints representing a broad spectrum are clearly expressed”;  
• *Inclusive* – “[e]ach participant must at least have the chance to be heard. Yet at the same time, a deliberative forum must be inclusive and open to all members of the relevant community; it cannot be [both] exclusionary and democratic”;  
• *Informed* – “deliberative dialogue cannot be divorced from information, and participants must have access to a wide variety of viewpoints in order to make effective and educated decisions”;
• *Public* – a dialogue “must be open, accessible, and explicitly dedicated to the interests of the group, rather than any individual or particular interest group”; and

• *Facilitated* – some mechanism for “[m]oderation is essential to managing the work of groups or teams online or off” and “[t]he only way to manage the competing voices of a large number of participants is to facilitate the dialogue, highlighting what is productive and suppressing what is destructive” (pp. 12-17).

Understanding if individuals perceive these 11 ideals manifesting through a given online participation process, then, is to understand how closely a designed system aligns with an ideal online deliberative democratic process. Or, put simply, this degree of alignment may indicate how effective such an online process is in terms of democracy and public participation and whether such a process is “subjectively legitimate” (Nino, 1996). This study operationalizes these ideals in a series of interviews with participants from Next Stop Design in order to gauge whether participants viewed the project as an effective online participation process.

**Democratic Process in Organized Networks**

It is worth discussing briefly why something like online deliberation (as it has so far been conceived) might not fit the contours of democracy as well as other methods in the realities of an increasingly networked information society. In light of moves to involve the public in urban planning, by law or voluntarily, in theory and in practice, the planning discipline has embraced the notion of a deliberative ideal of democracy. In this model, public consensus is desired to achieve a public good (a plan), and this consensus is reached through the meaningful discussion and negotiation of the diverse viewpoints of stakeholders (Pimbert & Wakeford, 2001). Traditional, offline planning committees and
public involvement meetings following the mantra of multistakeholderism and multiculturalism employ the many tools of deliberative democratic process, including juries, polls, and forums (Carson & Hartz-Karp, 2005). The deliberative democratic model even promises to be a “new [model] of collaboration between citizens, experts and decision-makers based on [a] new paradigm and assumptions” which may bring “greater wisdom to governance” and, by extension, greater wisdom to public plans (Hartz-Karp, 2007, p. 2).

However, the deliberative democratic model assumes the successful functioning of representative democracy, which, as it is predicated on the vertical, hierarchical form of the nation-state, may be ineffective for the horizontal, distributive capacities of networks. The prominent current in the critical study of globalization tells us of the obsolescence of the nation-state, favoring instead a social order that acknowledges movement, flows (Appadurai, 1996), and an existence within organized networks that have co-emerged with digital technologies and information economies (Castells, 1996; Rossiter, 2006). The future focus ought to be on “relational processes not representational procedures” (Rossiter, 2006, p. 13). Deliberative democracy models are inadequate (Hull, 2000; Rossiter, 2006). As Rossiter (2006) puts it frankly: “It is time to abandon the illusion that the myths of representational democracy might somehow be transferred and realized within networked settings. That is not going to happen” (p. 95).

The best plans feel as though they emerged from the community organically, as if they sprung from the public in ways that enable all bodies to see themselves happily in a space. Lao Tzu knew that good leadership was the kind where leaders empowered others to feel a sense of ownership over their successes. Good leadership, effective democracy,
well executed public involvement campaigns—each emphasizes the *process* of citizens achieving, realizing possibilities, and strengthening relationships. Urban planning is nothing if not the reaching for these ideals in the built environment. Forms like the crowdsourcing model can tap the possibilities for digital communication networks to mobilize citizens, foster creative input, and produce plans through democratic processes that more accurately address our lived experience within organized networks today.

Kriplean, Beschastnikh, Borning, McDonald, and Zachry (2009) argue for the need to design new media systems that create “sockets” between governments and citizens in order to produce (or, rather, cocreate) solutions for the public good through the combined efforts of everyday people and administrators. Following this and considering Noveck’s (2003) ideals for online participation and deliberative process, I will make the case in the remainder of this chapter that the crowdsourcing model fills this need for a “socket” and can be used to leverage citizen input in new urban planning contexts effectively online, all while remaining true to the ideals of deliberation.

**Crowdsourcing as a Model for Problem Solving**

Jeff Howe (2006a) coined the term *crowdsourcing* in an issue of *Wired* magazine. The term describes a new Internet-based business model that harnesses the creative solutions of a distributed network of individuals through what amounts to an open call for proposals. In a companion blog to his breakthrough article, Howe (2006b) defines the model in his own words:

> Simply defined, crowdsourcing represents the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call. . . . The crucial prerequisite is the use of the open call format and the large network of potential laborers. (para. 4)
Howe (2006c) further clarifies that “it’s only crowdsourcing once a company takes that design, fabricates [it] in mass quantity and sell[s] it” (para. 1). In other words, a company posts a problem online, a vast number of individuals offer solutions to the problem, the winning ideas are awarded some form of a bounty, and the company mass produces the idea for its own gain.

Crowdsourcing can be seen as a problem solving model because, in a problem solving sense (Jonassen, 2003), the “goal state” of a company is to acquire innovative, sellable, original ideas. The company’s “task environment” or “problem space” for this acquisition process occurs through a contest-type format through the company’s Web site. The “problem” the company needs solved varies, but generally consists of needing a product designed or a scientific problem cracked. And the company’s “solutions” come from the online community of participants—the “crowd”—in the form of submissions to the site. Crowdsourcing is a blend of open creative process and typical top-down program management.

Some of the notable business case studies of crowdsourcing help illustrate both how the model functions and how the model resembles a problem solving process akin to public participation and deliberation in the service of the public good. Syntheses of these several case studies can be found in Howe’s original article (2006a), his book (Howe, 2008), and in my own work (Brabham, 2008a; Friedland & Brabham, 2009). A typology of various crowdsourcing cases turns up four dominant approaches: the knowledge discovery and management approach; the broadcast search approach; the peer-vetted creative production approach; and distributed human intelligence tasking (Friedland & Brabham, 2009).
The Knowledge Discovery and Management Approach

The Peer-to-Patent Community Patent Review project is an exemplar of the knowledge discovery and management approach to crowdsourcing (Noveck, 2006). Peer-to-Patent was a pilot project from 2007 to 2009 between New York Law School and the U.S. Patent and Trademark Office (USPTO), with support from a number of major corporate patent holders. In the Peer-to-Patent project, the USPTO siphoned off a small number of patent applications it received to an online community. This online community of more than 2,000, working for no monetary reward, reviewed applications for evidence of “prior art,” and these findings are routed back to the USPTO. Overburdened and backlogged with patent applications, the USPTO then used these findings to help determine whether new patents should be awarded.

In this approach, online communities were challenged to uncover existing knowledge in the network, thus amplifying the discovery capabilities of an organization with limited resources. In terms of knowledge management, applications in the spirit of “commons-based peer production” (Benkler, 2002) enabled an online community to collect, edit, and otherwise manage the knowledge base in distributed ways; Wikipedia is an exemplar case of this process. At Wikipedia, a collaboratively produced encyclopedia, participants are free to write articles for the collection or to edit existing entries, all on a platform that is simpler to use than HTML and that automatically connects relevant articles together. Both Peer-to-Patent and Wikipedia essentially task an online community to find and organize information; in the former case, this tasking is more hierarchically organized, while in the latter it is a decentralized process. Peer-to-Patent more closely embodies the crowdsourcing definition than Wikipedia for this reason, but
both cases are important for understanding the capabilities of crowds. In each case, the more users there are and the more involved they are, the better the system functions.

**The Broadcast Search Approach**

InnoCentive, founded in 2002, focuses on providing research and development solutions for a broad range of topic areas, from biomedical and big pharmaceutical concerns to engineering and computer science topics. It boasts a community of 64 client companies, called “Seekers,” and 165,000 “Solvers,” offering cash rewards ranging from US$5,000 to US$1 million. According to Lakhani et al. (2007), “[s]olution requirements for the problems are either ‘reduction to practice’ (RTP) submissions, i.e., requiring experimentally validated solutions, such as actual chemical or biological agents or experimental protocols, or ‘paper’ submissions, i.e., rationalized theoretical solutions codified through writing” (p. 5). Submitted solutions are never seen by other Solvers; only Seekers pour over submissions.

The problem set consists of difficult, if well defined and scoped, scientific and engineering challenges, such as finding a biomarker that tracks the progress of ALS disease for a US$1 million reward. Seekers can post a range of rewards and requirements for deliverables, while Solvers are rewarded individually by the Seeker companies in exchange for their intellectual property. Lakhani et al. (2007) conducted a statistical analysis of the InnoCentive service between 2001 and 2006. They found that the Solver community was able to solve 29% of the problems the Seekers—all large companies with internal labs and researchers—posted after they were unable to solve these problems internally. Moreover, the results found a positive correlation between the distance the Solver was from the field in which the problem was presented and the likelihood of
creating a successful solution. That is, Solvers on the margins of a disciplinary domain—outsiders to a given problem’s domain of specialty—performed well in solving the problem.

The Goldcorp Challenge is a similar broadcast search crowdsourcing case (Tischler, 2007). Goldcorp, a Canadian gold mining company, developed the Challenge in March 2000. According to a company press release, “participants from around the world were encouraged to examine the geologic data [from Goldcorp’s newly acquired Red Lake Mine in Ontario] and submit proposals identifying potential targets where the next six million ounces of gold will be found” (“Goldcorp Challenge Winners!,” 2001, para. 6). By offering more than US$500,000 in prize money to 25 top finalists who identified the most gold deposits, Goldcorp attracted “more than 475,000 hits” to the Challenge’s Web site and “more than 1,400 online prospectors from 51 countries registered as Challenge participants” (“Goldcorp Challenge Winners!,” 2001, para. 6). The numerous solutions from the crowd confirmed many of Goldcorp’s suspected deposits and identified several new ones, 110 deposits in all. Goldcorp’s subsequent Global Search Challenge, with US$2 million in cash and capital investments available for winning, launched in 2001.

Broadcast search approaches to crowdsourcing are oriented towards finding the “lone gunman” specialist scientist with time on their hands, probably outside the direct field of expertise of the problem, who is capable of adapting previous work to produce a solution. In theory, the wider the net cast by the crowdsourcing organization, the more likely the company will turn up the “lone gunman” or the “needle in the haystack.”
The Peer-Vetted Creative Production Approach

Though the concept of broadcasting a challenge to an online community is the same, the Threadless online community functions differently than InnoCentive or Peer-to-Patent. Howe (2006d) calls Threadless one of the exemplar cases of crowdsourcing: “pure, unadulterated (and scalable) crowdsourcing.” Based in Chicago and formed in late 2000, Threadless is the flagship property of parent company skinnyCorp, whose motto is “skinnyCorp creates communities” (“skinnyCorp,” n.d.). Threadless is an online clothing company, and as of June 2006, Threadless was “selling 60,000 t-shirts a month, [had] a profit margin of 35 per cent [sic] and [was] on track to gross [US]$18 million in 2006,” all with “fewer than 20 employees” (Howe, 2006d, para. 1).

At Threadless, the ongoing challenge to the registered members of the online community is to design and select silk-screen t-shirts. Members can download t-shirt design templates and color palettes for desktop graphics software packages, such as Adobe Illustrator, and create t-shirt design ideas. They then upload the designs to a gallery on the Threadless Web site, where the submissions remain in a contest for a week. Members vote on designs in the gallery during this time on a five-point rating scale. At the end of the week, the highest rated designs are finalist candidates for printing, and the Threadless staff chooses about five designs to mass produce each week. These “t-shirts are then produced in short production runs and sold on the site,” back to members in the online community (as well as to unregistered visitors to the site) through a typical online storefront (Fletcher, 2006, p. 6). Threadless awards winning designers US$2,000 in cash and US$500 in Threadless gift certificates in exchange for their intellectual property.
The logic of Threadless—and similar cases, such as user-generated advertising contests (Brabham, 2009)—is that by opening up the creative phase of a designed product to a potentially vast network of Internet users, some superior ideas will exist among the flood of submissions. And further still, the peer vetting process will simultaneously identify the best ideas and collapse the market research process into an instance of firm-consumer cocreation. It is a system where a “good” solution is also the popular solution, and a solution the market will support.

**Distributed Human Intelligence Tasking**

Different still from the previous cases is Amazon Mechanical Turk (Barr & Cabrera, 2006). At Mechanical Turk, “Requesters” can use the site to coordinate a series of simple tasks they need accomplished by humans, tasks that computers cannot easily do, such as accurately tagging the content of images on the Internet for a search engine. Individuals in the Mechanical Turk community, known as “Turkers,” can then sign up to accomplish a series of these “human intelligence tasks” (HITs) for very small monetary rewards paid by the Requester. Certainly the least creative and least intellectually demanding application for individuals in these kinds of online communities, Mechanical Turk essentially coordinates large-scale collections of simple tasks requiring human intelligence. It is similar to the concept of large-scale distributed computing projects, such as SETI@home and Rosetta@home, except replacing spare computing cycles with humans engaged in short cycles of labor.

This kind of “distributed human intelligence tasking,” so to speak, can be seen in other cases. For example, Subvert and Profit uses this format to coordinate the gaming of social media sites like Digg and StumbleUpon (Powazek, 2007). Confidential clients pay
Subvert and Profit to distribute rating tasks for certain stories and Web sites to registered users, who can each make small amounts of money for performing the tasks.

Crowdsourcing is one specific form of participatory social media, part of a greater “Web 2.0” spectrum that includes open source production, commons-based peer production, blogging, video-posting and photo sharing sites, massively multiplayer online games, and other forms. It is unique from these other forms in that it involves an organization-user relationship whereby the organization executes a top-down, managed process that seeks the bottom-up, open, creative input of users in an online community.

Each of these various crowdsourcing approaches—knowledge discovery and management, broadcast search, peer-vetted creative production, and distributed human intelligence tasking—can be employed in specific contexts to accomplish certain goals. Depending on the type of input needed from a crowd of online participants and understanding what motivates these crowds to participate in a specific task environment, any number of new media tools could be designed to meet the needs of an organization in search of a solution to a problem. And why not design these tools to serve the public good, to make government function better and more democratically, rather than focus entirely on for-profit applications? Crowdsourcing may very well be a model for solving our world’s most pressing social and environmental problems.

Crowdsourcing is a legitimate, complex problem solving model, more than merely a new format for holding contests or awarding prizes. It is a model capable of aggregating talent and leveraging ingenuity while reducing the costs and time formerly needed to solve problems. I believe the model is promising for government and non-profit applications, and the Peer-to-Patent project suggests this business model’s greater
use in public context. Urban planning projects can take up the model particularly as a means to enable public participation. In essence, any urban planning project is predicated on a problem. Typically that problem is how best to accommodate changing populations with different infrastructure, all while considering the interests of residents, developers, business owners, and the environment. If a problem can be framed clearly, and if all the data pertaining to a problem can be made available, then that problem can be crowdsourced. The traditional format for citizen involvement in planning projects has involved town hall meetings, workshops, and charrettes, but these face-to-face meetings have their limits in maximizing the creative input of citizens. This process needs to go online, and Next Stop Design provides a rich case for examining these issues in the study. I turn now to issues of motivation in crowdsourcing arrangements, as this provides the theoretical framework for RQ2.

Moving the Crowd

Uses and gratifications (U&G) theory assumes an active audience engaged with various media seeking certain gratifications. Throughout the evolution of U&G theory, some scholars have wrestled with exactly how active audiences really are, especially in the era when television seemed to lull individuals into passive receivers of information and entertainment (Levy & Windhal, 1984; Rubin, 1984; Windahl, 1981). However, since the popularity of new media technologies, such as the Internet, surged in the 1990s, U&G scholars have come to terms with the fundamentally interactive nature of these technologies that require in audiences a large degree of activity (Ruggiero, 2000). In an exhaustive review of U&G theoretical development over the years, Thomas E. Ruggiero (2000) writes that “[t]heoretically and practically, for U&G scholars, however, the basic
questions remain the same [in the new media era]. Why do people become involved in one particular type of mediated communication or another, and what gratifications do they receive from it?” (p. 29).

Regarding gratifications, scholars have worked tirelessly to catalog individuals’ media use, through self-reports in surveys and interviews as well as through observation and experimentation, to develop extensive typologies explaining how and why individuals use media. In fact, this emphasis on descriptive typologies, rather than on coherent theory-building, is one of the primary critiques of U&G theory (Elliott, 1974; Lometti, Reeves, & Bybee, 1977; Rosenstein & Grant, 1997; Swanson, 1977). Still, U&G typologies serve an important purpose early in the development of any new media technology or technique (Ruggiero, 2000), as scholars must first catalog basic usage habits to understand the role of a technology in an individual’s life and its basic place in society. This helps to set the stage for more sophisticated research and theory-building later, as technologies mature and their social impacts are easier to grasp.

Beginning in the 1970s, U&G scholars focused on “audience motivations and developed additional typologies of the uses people made of the media to gratify social and psychological needs” (Ruggiero, 2000, p. 6). These needs include, broadly, the needs for information, to develop or reinforce personal identity, to aide in one’s integration and social interaction, and for entertainment (McQuail, 1983, pp. 82-83).

U&G theory is akin to theories in social psychology concerning intrinsic and extrinsic motivation. Deci and Ryan (1985) differentiate between intrinsic and extrinsic motivators in their Self-Determination Theory (SDT). “Intrinsic motivation is defined as the doing of an activity for its inherent satisfactions rather than for some separable
consequence,” such as “for the fun or challenge entailed” (Ryan & Deci, 2000, p. 56).
Likewise, extrinsic motivation “pertains whenever an activity is done in order to attain some separable outcome,” such as financial reward, fame, or social pressure (Ryan & Deci, 2000, p. 60). Extrinsic and intrinsic motivators interact in such a way that extrinsic rewards undermine intrinsic motivation (Deci, Koestner, & Ryan, 1999), and in a specific scenario, participants may engage in an activity for a variety of reasons both intrinsically and extrinsically motivated (Lakhani et al., 2007; Brabham, 2008b).

U&G theory suggests that individuals in the crowd are likely drawn to crowdsourcing applications for a number of reasons and that they are gratified in various ways through participation. The ways in which individuals use and are gratified by new media technologies differ from studies of individuals’ use of “older” media technologies, such as newspapers and television. The primary categories of uses and gratifications that emerged from the many individual and collaborative efforts of Blumler, Katz, and Gurevitch in the 1970s (Blumler, 1979; Katz, Blumler & Gurevitch, 1974; Katz, Gurevitch & Haas, 1973), for example, are necessarily limited by the fact that the media of the time of those studies did not offer nearly as many interactive possibilities and user-productive modes as the digital technology of the Internet era (Ruggiero, 2000). Today, audiences do not merely use and seek pleasure from content; today, audiences are producers and consumers, what futurist Alvin Toffler (1980) called a “prosumer,” of media content. This is not to say the behaviorist researchers of the “old” media era do not still have some relevance (Ruggiero, 2000). After all, their findings were important in that they discovered an audience that was not merely a passive receptacle for media content but was instead fundamentally interactive. Early uses and gratifications research
prophesized a moment when the pleasures of media interactivity would amplify if users were given media technologies that truly enabled production. The Internet, specifically given the recent Web 2.0 trend toward massive user-generated online content, is the vehicle for distributed, large-scale, pleasurable production.

Henry Jenkins (2006) notes that we are now fully in a time of “participatory culture,” which means a “culture with relatively low barriers to artistic expression and civic engagement, strong support for creating and sharing one’s creations, and some type of informal mentorship whereby what is known by the most experienced is passed along to novices” (p. 3). Further, members of participatory culture “believe their contributions matter, and feel some degree of social connection with one another” (Jenkins, 2006, p. 3). Supporting this, Liu, Liao, and Zeng (2007) found in a study of bloggers that “connecting with people” was the second most valued reward for blogging, behind the enjoyment of “pouring out feelings.” For bloggers, and for other participants in social media arrangements, it matters to be able to express oneself and to have that expression met by others in the mediated space.

Even within the broad concept of interactivity in the new media era, it has been suggested by Ha and James (1998) that five dimensions of interactivity may help U&G researchers understand the motivations of Internet users to engage with certain Web sites. These five dimensions are playfulness, choice, connectedness, information collection, and reciprocal communication (Ha & James, 1998). According to a user’s need, a Web site may gratify a user by providing relevant information or playful diversion, which falls in line with long-standing broad motivations in U&G theoretical tradition, but on the Internet, individuals may also be motivated and gratified by the ability to connect with
entirely different sources of information (through hypermedia capabilities) and communicate with other individuals in the virtual space. Jenkins (2006) also emphasizes the importance of both play and reciprocal communication in motivating individuals in participatory culture to continue to improve their creative skills (p. 20). This reciprocity online is akin to (offline) notions of social capital (Putnam, 2000), and “[s]ocial capital is of critical importance in motivating people to share their individual contributions” online (Fischer, 2002, para. 82).

Moving from social capital and reciprocity toward attention-seeking from peers, some studies suggest that individuals in participatory cultures are more likely and motivated to contribute content to various social media sites when they perceive that peers are consuming and valuing their content. For instance, Brzozowski, Sandholm, and Hogg (2009) note that social media spaces within large enterprises sustain more participation when individuals in the space receive comments on their contributions to the commons and other indicators of peer value. Huberman, Romero, and Wu (2009) note a similar phenomenon regarding the motivations of YouTube members to post videos to the site and to continue posting videos over time. Wu, Wilkinson, and Huberman (2009) call these important processes of attention-seeking and peer recognition “feedback loops.” Indeed, social capital and reciprocity online may better be thought of as a kind of feedback loop ecology of sorts. Underlying feedback loops, though, individuals in participatory social media must also find some kind of pure enjoyment in participating, as Nov (2007) found in a survey of Wikipedia contributors, and individuals should have the opportunity to experience participation socially, with others, as Nov, Naaman, and Ye (2008) found in a study of content tagging at photo sharing site Flickr. Fun,
connectedness, and peer feedback appear to be consistent motivators across several studies of participatory culture.

A wealth of recent studies into audience motivations for online media use have focused on the practice of open source software production. I tackle the issue of open source production motivators separately here, since it is important to distinguish open source from crowdsourcing. In the open source process, users essentially work for free to create software (Coar, 2006), which in itself undermines the power of simple extrinsic motivators such as money, and it also complicates intrinsic motivators. Several studies on motivation in open source participation (Bonaccorsi & Rossi, 2004; Ge, Dong, & Huang, 2006; Hars & Ou, 2002; Hertel, Niedner, & Herman, 2003) support what open source pioneer and founder of Linux, Linus Torvalds, predicted would be the primary motivator: the pleasure found in doing hobbies. As Torvalds states, “most of the good programmers do programming not because they expect to get paid or get adulation by the public, but because it is fun to program” (Ghosh, 1998b, para. 63). In fact, as Lakhani and Wolf (2005) point out, though much theorizing on individual motivation in open source programming points to the primacy of extrinsic rewards, such as the opportunity for career advancement, intrinsic motivators, such as the enjoyment derived from building one’s skills and solving tough coding problems, are more important. This emphasis on fun and self-fulfillment resonates with other motivational studies of social media (Liu et al., 2007; Nov, 2007; Smadja, 2009).

Though similar, open source production is not the same as crowdsourcing, for a number of reasons I detail in the following paragraphs. Some of these differences relate to motivation. Many of the people tinkering with the source code for Linux, Mozilla
Firefox, or other open source projects are hobbyists who would be doing this kind of tinkering anyway. The payment for their service in producing a better version of a software application is perhaps recognition among other hobbyists, but, more importantly, the pursuit of the problem and the satisfaction in finding a better solution to the problem is payment enough (Bonaccorsi & Rossi, 2004; Ghosh, 1998b; Hars & Ou, 2002; Hertel et al., 2003; Lakhani & Wolf, 2005). There is an intrinsic, feel-good reward in solving the puzzle (Ghosh, 1998b; Raymond, 2003), and perhaps some social capital among fellow hobbyists if one succeeds (Ge, Dong, & Huang, 2006).

Not all problems are as well suited for the open source model as software development. In simple economics, software can be produced with basically no overhead costs. The Linux or Mozilla programs exist virtually, in ones and zeroes, occupy no shelf space in a brick-and-mortar storefront, use no raw materials, emit no waste products, and the distribution is free—as easy as a download from a Web site. Not all products are composed of digital code; the overwhelming number of designed products in our built world are made from actual materials, require machines to produce, have real-world costs associated with distribution, and so on. What happens when the product that needs to be improved—or invented in the first place—actually has these kinds of material production costs? Will the hobbyist’s interest in the problem, and his or her subsequent donation of free labor, account for the costs of producing the improved end product? A company investing in the capital to produce such a product would need to ensure at least enough sales to cover the investment. Thus, if the product will eventually be sold for a profit, would a human, with a natural degree of self-interest, reasonably want to donate his or her talent and energy to the project without a cut of the profits? In contrast to open source
production, crowdsourcing provides a clear format for compensating contributors, a hybrid model that blends the transparent and democratizing elements of open source into a feasible model for doing profitable business, all facilitated through the Internet.

Further, winning crowdsourced solutions, because they are owned in the end by the company posting the call for solutions to its problem, have a monetary value relative to the potential to maximize profits from the solution. Because the ideas of the crowd can yield profits, those ideas can be relied upon to offset the costs of the material production. In other words, Threadless must eventually silk screen the crowd’s ideas onto t-shirts, must incur the expenses of shipping the shirts, maintaining the Web site, renting the warehouse space, and buying the clothing and ink. Since the work of t-shirt production costs Threadless money, it reasonably must own the ideas it acquires from the crowd to guarantee no other clothing company can make the exact same shirts, lest the t-shirt design lose its exclusive aura, its endowment as a commodity, and its fetish appeal. InnoCentive and other crowdsourcing firms also make arrangements for intellectual property transfer from the crowd. For material objects to have cultural importance as commodities in capitalist societies, the idea driving the object must be somehow novel, rare, and coveted. Open source production works precisely against this notion by liberating code, making it available to everyone.

For these reasons, open source production is not the same as crowdsourcing, and perhaps the most crucial distinction involves issues of motivation. Where open source models emphasize the common good (Bonaccorsi & Rossi, 2003, 2004; Lancashire, 2001) and hobbyist (Ghosh, 1998a, 1998b, 2005) interest in the success of certain applications, crowdsourcing models add to these factors the existence of a bounty. The
bounty can sometimes consist of cash and prizes, but it also includes cultural capital and can help people learn skills and develop portfolios for future work and entrepreneurship (S. Mack, 2006). In today’s new media landscape, individuals have plenty of opportunities to make modest incomes from intermittent labor through various Web sites. These opportunities include “gold farming” (Knauer, 2008), participating in “human search engine” networks like ChaCha (Lagesse, 2008), and participating in income-generating crowdsourcing activities. We can conceivably add the opportunity to make money as a real motivator for Internet users today, and indeed some of the existing research on motivations in crowdsourcing applications specifically supports this. Smadja (2009) even suggests that organizations seeking to motivate online communities for various reasons should seek to make the participatory experience for individuals both profitable and fun in certain ratios.

Some empirical research exists that helps to explain why individuals do what they do in crowdsourcing arrangements. Three quantitative surveys investigating the motivations of crowds paint a partial picture of how the opportunity to make money specifically, and other motivators generally, drive the crowd’s participation in crowdsourcing applications. In a study of the crowd at iStockphoto, a kind of peer-vetted creative production-meets-distributed human intelligence tasking crowdsourcing case, I found that the opportunity to earn money (the bounty) and the opportunity to develop one’s creative skills trumped the desire to network with friends and other creative people, and it outranked other altruistic motivations (Brabham, 2008b). At crowdsourcing company InnoCentive, Lakhani et al. (2007) found that intrinsic motivators, such as “enjoying problem solving and cracking a tough problem,” as well as financial reward,
were significantly positively correlated to success as a solver on the site. In the crowd-made film *Star Wreck*, a peer-vetted creative production case, it was found that the crowd participated in the creation of the movie because it was fun for passing time and they liked sharing knowledge and skills with others, among other altruistic reasons, but not because they wanted to make money (Lietsala & Joutsen, 2007). Finally, a series of online interviews I conducted with the crowd at Threadless revealed that the opportunity to make money, the opportunity to develop one’s creative skills, the potential to take up freelance work, and the love and addiction to the Threadless community were the primary motivators for participation (Brabham, in press).

It is clear that a constellation of motivators exists across several crowdsourcing cases of varying types, but no one clear set of motivators applies to all crowdsourcing instances. Sometimes the opportunity to make money is a motivator for the crowd (e.g., Threadless, iStockphoto, InnoCentive), but sometimes it is not (e.g., *Star Wreck*). Sometimes the love of community is important for participants (e.g., Threadless, *Star Wreck*), sometimes it is not (e.g., iStockphoto), and so on. This speaks to the general difficulty in empirical research involving complex, context-specific cases. This difficulty is also noted in the deliberative democracy literature (Ryfe, 2005). Descriptive typologies would be valuable in these instances.

Synthesizing the literature on motivation across a variety of social media instances—open source production, Wikipedia, YouTube, blogging, crowdsourcing, and more—I distill motivations for participation down to nine broad categories:

- To make money
- To advance one’s career
• To be recognized by peers
• To meet new people and socialize
• To contribute to a collaborative effort
• To have fun
• To pass the time when bored
• To learn new skills and knowledge
• To express oneself

Following the long tradition in U&G research of refining descriptive typologies, especially in the wake of new technologies and new media arrangements, I operationalize these nine broad motivational categories through interview questions with Next Stop Design participants. There is value in generating typologies of motivators through qualitative studies of new and unique mediated cases. “The theoretical product of many qualitative projects is the development or refinement of descriptive typologies” (Lindlof & Meyer, 1987, p. 11), and this study seeks to generate such a constellation of motivators from individuals in the Next Stop Design crowd. Interpreting the emergent motivators in conjunction with the findings in RQ1 regarding deliberative democratic process, this dissertation will ultimately contribute to communication theory an appraisal of the utility of crowdsourcing for online democratic process and added richness and refinement to motivational typologies for participatory online communities.

Given the theoretical discussion in this chapter and the goals for the study, I restate my research questions again, with subquestions to further tease out the concepts:

1. Did participants in the Next Stop Design project perceive crowdsourcing as an effective form of online public participation?
a. Did participants in the Next Stop Design project perceive that the project exemplified the 11 ideal features of online democratic process (accessible, free of censorship, autonomous, accountable and relevant, transparent, equal and responsive, pluralistic, inclusive, informed, public, and facilitated)?

b. Did participants in the Next Stop Design project perceive that the project lacked any of the 11 ideal features of online democratic process?

2. Why did individuals participate in the Next Stop Design project?

a. What needs do participants seek gratification for?

b. How, if at all, are these needs gratified through their participation on the site?

c. Which of the nine broad motivators (making money, career advancement, peer recognition, socializing, contributing to a common effort, having fun, passing the time, learning new skills, and self-expression) apply to Next Stop Design participants?

In the next chapter, I detail my method for operationalizing these research questions.
CHAPTER 3

METHOD

Given the discussion of online deliberative democratic process and user motivations in Chapter 2, a methodology I call critical media design may be best for interrogating the effectiveness of online participation tools like Next Stop Design. A critical media design approach is complex and multimethod, a series of studies both quantitative and qualitative that come together to make a larger claim about a new media case. To this end, I focused on qualitative online interviews in this study to make a substantial contribution to the overall critical media design approach of Next Stop Design. This chapter details the method, interviewing via instant messenger, for how the study addresses the overarching research questions concerning public participation and motivation stated in the previous chapters. It begins with a discussion of applied communication research and critical inquiry to put forth a rationale for a critical media design approach to this study. Next, a discussion of the Next Stop Design case, which is the vehicle for this study, and a summary of the basic findings from that case provide needed context for an explanation of the study’s design. The final portion of this chapter focuses on the utility of interviewing online, a description of participant recruitment procedures, an interview guide to operationalize concepts related to research questions, and a discussion of transcript coding procedures.
The way Buddenbaum and Novak (2001) describe it, the distinction between basic research and applied research is that the goal of the former is “to create, test, and improve theory” while the goal of the latter is “to provide solutions to real-world problems” (p. 14). To be fair, Buddenbaum and Novak (2001) ultimately resist neatly containing these two approaches to social scientific research in such simple definitions, and eventually they argue that the two approaches ought to “complement each other, working together to enhance understanding” (p. 14). Yet, there is much more to be said about the complex interplay between theory building and applied work in social scientific inquiry, particularly when this interplay serves humanistic, critical ends. Hickson (1973) asserted a definition for applied communications research in the inaugural issue of the journal by the same name: “the investigation of human communication events by a participant/observer of those events into a communication artifact that will help bring about communique-social change” (p. 3). That is, a researcher ought to “be, simultaneously, actor, observer, and critic” in relation to his or her research subjects (all the while acknowledging his or her subjectivity); must report findings in a way that non-scholars can understand and benefit from; and ought to strive for improving some aspect of the world through his or her work (Hickson, 1973, pp. 3-4). Following this definition, Tesch (1975) seems to refer to this kind of research not so much as applied, but as humanistic, adding also that such research should not claim to be generalizable and that it should be undertaken when the urgency of a problem does not allow for rigorous scientific research or other methodological considerations. No matter the label, this brand
of inquiry is primarily problem-driven and concerned with real communicative interactions rather than hypothetical scenarios or laboratory situations.

Because of the primacy of the problem in the design of applied communication studies, there tends to be a drive to select issues or problems first, usually coupled with research sites or texts or events, and then to select appropriate methods for tackling the problem at hand. Applied research then tends to be inductive rather than deductive, making sense from the data that emerge in the course of understanding the problem being investigated and developing solutions for bringing about change. And as these research practices cobble together cohesive theories of human communication, we come to know the greater project of applied communication research as often akin to grounded theory (Denzin & Lincoln, 1994; Glaser & Strauss, 1967; Strauss & Corbin, 1990, 1997).

The notions of problem solving, connecting research with nonscholars, and working to change the world for the better through communication research resonates with the mantra of critical theory as well. Critical communication research, with its roots in the Frankfurt School, Marxism, feminism, and other schools of thought, is concerned with injustice and imbalances of power in the world—often in consideration of historical material conditions and along lines of race, class, gender, sexuality, and other identity markers—and seeks to intervene in such unjust discourses and practices. I am both a committed critic in this sense and an applied communication researcher, and thus, coupled with an interest in the power of media to play a role in such critical intervention, I seek to practice a form of what I call critical media design in my work. Critical media design can best be explained as a theorem synthesizing the concepts presented so far in this chapter:
If:

- A researcher embraces a critical purpose (a desire to improve the world) in/through his or her work;
- A researcher assumes the role of media in constructing our social reality and thus also a role in contributing to unjust conditions in the world;
- A researcher values the importance of media as tools for social change; and
- New technologies increasingly enable everyday citizens to take charge of the media production process and design messages for themselves;

Then:

- Researchers can develop research programs that work to create original media processes and products that improve the world. These media processes and products can be the basis for, and the results of, a carefully crafted, iterative, grounded, and applied series of communication studies.

I acknowledge the irony in eschewing deductive reasoning in favor of inductive research methods, only to offer a rationale for what I see as a preferred approach to inductive communication research through the deductive logic of a theorem. Still, this theorem neatly sums up my take on critical media design.

Communication researchers, then, ought to conceive of themselves not only as students of mediated communicative phenomena, but also as designers of the very mediated environments they study. Scholars in related disciplines, such as Noveck (2003), Fischer (2002), Cross (2001), Illich (1973), and Mau (2004), have also called for design-minded research programs; the roots of design thinking as a part of applied social research can be traced at least back to Mumford (1934) and Buckminster Fuller (1963,
and early figures in computing encouraged designerly ways of thinking as well (Engelbart, 1962/2003; Licklider, 1960; Nelson, 1974/2003). It is in the vein of critical media design—and all that that phrase entails methodologically—that Next Stop Design was created to understand the attitudes and communicative actions of citizens in an online public participation context.

Next Stop Design as Research Site

Based on preliminary case study research on the crowdsourcing model and focused on the problem of trying to increase public participation in transit planning, Thomas W. Sanchez, Keith Bartholomew, and I secured funding through the U.S. Federal Transit Administration’s Public Transportation Participation Pilot Program (#2008-DOT-FTA-PTPP) to develop a Web site to test crowdsourcing in transit planning. The scope of the project was at the neighborhood scale, to try to solicit designs and ideas for bus stop shelters. With cooperation from the Utah Transit Authority (UTA), the site selected for the bus stop design project, named Next Stop Design, was a major transfer stop on Campus Center Drive (the “Business Loop”) in the heart of the University of Utah campus in Salt Lake City. This section of the university campus is experiencing substantial construction and renovation, undergoing a major transformation for the next several years, making this particular bus stop an appropriate test case for the Next Stop Design project in the opinion of UTA.

On the Next Stop Design Web site, at www.nextstopdesign.com, participants were presented with a variety of options for engagement with the project, as seen in Figure 1. Because we sought ideas from a crowd of participants through the Web site and wanted participants to vet the ideas of their peers in a simple voting scheme, our project
Figure 1. Screen capture of the Next Stop Design home page.
was clearly one of ideation, or idea generation, and the nature of the vetting process was to identify the popular design choice, or the one the market would support. As an ideation problem solving apparatus, the Web site was designed in the image of other peer-vetted creative production crowdsourcing applications, such as Threadless. Like at Threadless, participants could inform themselves about the nature of the challenge and the complexity of the actual bus stop location by reading information on the Web site. Then, they could design a bus stop shelter and upload the image to the Web site. From there, the image would enter a gallery with other designs and participants could cast a single vote for each design on a simple five-star voting scale, as seen in Figure 2. Participants could also leave comments on individual designs in the gallery, and a separate space on the Web site existed for participants to post other written comments and ideas about the competition or bus stop shelter design in general. In the design process, participants were encouraged through the information provided on the Web site to consider a variety of factors for bus stop shelters in Salt Lake City, including weather variations, safety, lighting, accessibility for people with mobility impairments, and other issues.

In order to submit designs to the Web site, comment on others’ designs, or vote, participants were required to register a username on the Web site. Registration was free and required a valid e-mail address. By registering on the Web site, participants executed a waiver of informed consent by clicking through a screen with standard wording, a process approved by University of Utah Institutional Review Board study #IRB00033913. On the registration form, participants were asked for their name, location (city, state, ZIP code, country), and e-mail address, as well as to create a unique username and password for the Web site, which would be used to identify them to others on the
Figure 2. Screen capture of a design entry’s page, with voting and commenting tools.
site. A basic demographic and transit use survey rounded out the registration form. These questions asked participants their race/ethnicity; how often, why, and for what purposes they used public transportation; whether they had ever previously attended a traditional public meeting or contacted someone to give their opinions on urban planning issues; and how they heard about the Next Stop Design competition. The last checkbox on the form asked whether the participant would be willing to be contacted by researchers for a follow-up interview at a later date. Participants were required to activate a confirmation link sent to their e-mail address in order to begin as a registered user on the Web site. The competition ran for a total of 16 weeks, launching June 5 and closing September 25, 2009.

**Basic Findings from Next Stop Design**

Google Analytics scripts were appended to each page of the Next Stop Design Web site. These scripts, a free service of Google, allowed the research team to track basic traffic and user data on the site, such as the numbers of visitors; pages viewed; referring sites, search engines, and search keywords; and geographic location of visitors. Like even the most expensive and sophisticated analytics packages, Google Analytics is imperfect, but it provided perhaps the best available approximation of user behavior on the Web site. Analytics scripts are imperfect in that a very small percentage of Web users employ script-blocking software on their Web browsers or use browsers that do not support scripting, which prevent the analytics service from tracking the user on the Web site. However, only a relatively small number of all Web users, estimated at about 5% in January 2008 (“Browser Statistics,” n.d.), use browsers that block or do not support scripting. Google Analytics also has a number of quirks with its geographic location
tracking that separates distinct national subdivisions from parent countries for discrete tracking. For instance, Guam and Puerto Rico are tracked as separate from the U.S., Taiwan and Hong Kong are tracked as separate from China, Greenland and the Faroe Islands are tracked as separate from the Kingdom of Denmark, and so on.

Based on information provided by Google Analytics, Table 1 describes Next Stop Design’s basic site traffic data. Based on information provided by participants in the registration process, Table 2 describes Next Stop Design’s registered users.

In sum, visitors to the Web site spent a substantial amount of time on the site, at more than 10 pages viewed per visit. General activity on the site—site traffic, number of registered users, number of votes cast, and number of designs submitted—far exceeded the initial expectations of the research team. Cheating in the contest was a major concern. It was discovered that fully 27.6% of all votes cast in the competition were a result of a handful of users who had created several dummy accounts. A rigorous method for determining fraudulent accounts and votes, which included examining voting patterns and geographic locations of IP addresses, led to the deletion of those accounts and votes to arrive at a legitimate ranking of winners in the competition. A mostly young and White crowd participated, consistent with demographics of the most active Internet users and content producers (Fox, 2005; Jones & Fox, 2009; Lenhart, Horrigan, & Fallows, 2004; Lenhart & Madden, 2005). Participants were mostly regular bus riders with a lack of prior participation in public planning activities.

International participation was impressive, but it was potentially problematic considering the Utah focus of the competition. Utah participation was relatively low. This was perhaps a result of a lack of Utah media coverage of the project and a lack of Utah
Table 1

*Basic traffic data from Next Stop Design*

<table>
<thead>
<tr>
<th>Basic Site Traffic</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Site visits</td>
<td>29,855</td>
</tr>
<tr>
<td>Page views</td>
<td>316,141 (10.6 pages viewed per visit)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Site Visits by Geography</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Countries/territories visiting</td>
<td>127</td>
</tr>
<tr>
<td>Top countries in terms of visitors</td>
<td>U.S. (16,045 visits; 53.7% of all visits)</td>
</tr>
<tr>
<td></td>
<td>U.K. (1,920 visits; 6.4% of all visits)</td>
</tr>
<tr>
<td></td>
<td>India (1,174 visits; 3.9% of all visits)</td>
</tr>
<tr>
<td></td>
<td>Greece (991 visits; 3.3% of all visits)</td>
</tr>
<tr>
<td></td>
<td>Canada (897 visits; 3.0% of all visits)</td>
</tr>
<tr>
<td>U.S. states visiting</td>
<td>50 (plus D.C.)</td>
</tr>
<tr>
<td>Top U.S. states in terms of visitors</td>
<td>New York (3,379 visits; 21% of all U.S. visits)</td>
</tr>
<tr>
<td></td>
<td>California (2,245 visits; 14.0% of all U.S. visits)</td>
</tr>
<tr>
<td></td>
<td>Utah (1,250 visits; 7.8% of all U.S. visits)</td>
</tr>
<tr>
<td></td>
<td>Texas (778 visits; 4.8% of all U.S. visits)</td>
</tr>
<tr>
<td></td>
<td>Louisiana (745 visits; 4.6% of all U.S. visits)</td>
</tr>
<tr>
<td>Cities in Utah visiting</td>
<td>29</td>
</tr>
<tr>
<td>Top Utah cities in terms of visitors</td>
<td>Salt Lake City (716 visits; 57.3% of all Utah visits)</td>
</tr>
<tr>
<td></td>
<td>Midvale (380 visits; 30.4% of all Utah visits)</td>
</tr>
<tr>
<td></td>
<td>Orem (20 visits; 1.6% of all Utah visits)</td>
</tr>
<tr>
<td></td>
<td>Provo (20 visits; 1.6% of all Utah visits)</td>
</tr>
<tr>
<td></td>
<td>Logan (17 visits; 1.4% of all Utah visits)</td>
</tr>
</tbody>
</table>

citizen interest in spreading news of the project through online social networks. Despite continued announcements to the Utah press and to blogs and social networks specific to Utah, and despite several national and international news outlets and blogs running news about the contest, the *Deseret News* and *Daily Utah Chronicle* were the only Utah news outlets willing to run a story about Next Stop Design, and they did so only a few days in advance of the competition ending in September in both print and online formats. Google Alerts, which track the appearance of user-specified keywords on the Internet, and
### Registered Users, Designs, and Votes

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered users</td>
<td>3,187</td>
</tr>
<tr>
<td>Bus stop designs submitted</td>
<td>260</td>
</tr>
<tr>
<td>Total votes cast in the contest</td>
<td>15,276</td>
</tr>
<tr>
<td>Fraudulent votes cast</td>
<td>4,218 (27.6% of all votes)</td>
</tr>
<tr>
<td>Legitimate votes cast</td>
<td>11,058</td>
</tr>
</tbody>
</table>

### Registered Users by Geography

<table>
<thead>
<tr>
<th>Geographic Area</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered users from the U.S.</td>
<td>1,448 (45.4% of all registered users)</td>
</tr>
<tr>
<td>Registered users from Utah</td>
<td>52 (3.6% of U.S. registered users)</td>
</tr>
</tbody>
</table>

### Registered Users by Race and Age

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>U.S. Registered Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, not Hispanic</td>
<td>935 users; 64.6%</td>
</tr>
<tr>
<td>Prefer not to disclose or left blank</td>
<td>225 users; 15.5%</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>129 users; 8.9%</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>73 users; 5.0%</td>
</tr>
<tr>
<td>Multiracial</td>
<td>42 users; 2.9%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>21 users; 1.5%</td>
</tr>
<tr>
<td>Other race/ethnicity</td>
<td>15 users; 1.0%</td>
</tr>
<tr>
<td>American Indian, Alaskan Native, or Native Hawaiian</td>
<td>8 users; 0.6%</td>
</tr>
</tbody>
</table>

### Range of ages of registered users

<table>
<thead>
<tr>
<th>Age</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>13-85 years old</td>
<td></td>
</tr>
<tr>
<td>&lt; 20 years old</td>
<td>9%</td>
</tr>
<tr>
<td>20-29 years old</td>
<td>49%</td>
</tr>
<tr>
<td>30-39 years old</td>
<td>21%</td>
</tr>
<tr>
<td>&gt; 40 years old</td>
<td>21%</td>
</tr>
</tbody>
</table>

### Registered Users by Ridership and Prior Public Participation Experience

<table>
<thead>
<tr>
<th>Experience</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rode the bus “more than once a week” or “every day”</td>
<td>48%</td>
</tr>
<tr>
<td>Rode the bus at least once a week</td>
<td>57%</td>
</tr>
<tr>
<td>Had never attended a public participation meeting before</td>
<td>68.5%</td>
</tr>
</tbody>
</table>
ongoing monitoring of Facebook reposts and Twitter retweets were the methods used to track online coverage of the competition. To the best of the team’s knowledge, no other Utah-specific social media or other online mentions occurred during the competition. Promotional efforts, both online and offline, were made throughout the run of the competition to drive participation generally and Utah participation specifically, but there was little local uptake.

The winning designs were representative of the general diversity of design submissions throughout the competition, as seen in Figure 3. The first place winner, “Folding Bus Stop,” was from an individual in Thessaloniki, Greece, and received a final score of 3.30 out of five stars. In second place was “Stop to Move,” by a group of individuals in Mumbai, India, receiving a final score of 3.05 out of five stars. Third place honors went to “Smart Stop,” created by an individual in Sioux Falls, South Dakota, in the U.S., with a final score of 2.89 out of five stars. There was no form of compensation offered to the winners; winning the competition did not guarantee construction of the design by UTA, nor was there a cash prize. The only reward offered by the competition to the winners was acknowledgment of their win in the form of a press release to media and announcement on the Web site itself.

The Design of this Study

Given the discussion above and the goals of this dissertation outlined in the previous chapters, this study seeks to uncover common themes through qualitative interviews with participants in order to determine if they perceived Next Stop Design as an effective form of public participation, as well as to understand why they participated in the project. Studying an online community like the one at Next Stop Design requires
Figure 3. Winning designs: a) “Folding Bus Stop,” b) “Stop to Move,” and c) “Smart Stop.”
Figure 3. Continued.
awareness of community norms and, in my opinion, studies should be conducted by researchers with substantial experience participating in myriad online community forms. It is important that online studies do not burden participants (Kaye & Johnson, 1999) and that they do not violate an online community’s expectations for topical relevance (Swoboda, Mühlberger, Weitkunat, & Schneeweiß, 1997) or its sense of privacy, tact, or politeness (Wright, 2005). A researcher familiar with the conventions of online community would likely be better suited to study these phenomena than novices.

Conducting interviews via instant messenger (IM) programs is the most appropriate way to study the Next Stop Design community. Research that “explores an Internet-based activity such as . . . online community” ought to be conducted online, since “research participants are already comfortable with online interactions” (Kazmer & Xie, 2008, pp. 257-258). Online interviewing methods have begun to receive thorough scholarly treatment (e.g., Al-Saggaf & Williamson, 2004; Davis, Bolding, Hart, Sherr, & Elford, 2004; Kazmer & Xie, 2008; Lange, 2008; Mann & Stewart, 2000; O’Connor & Madge, 2001; Opdenakker, 2006; Stieger & Reips, 2008). IM interviewing allows synchronous and semi-private interaction and can automatically record the interaction text. The ad hoc conversational nature of IM interviews lets them resemble oral interviews. As a result, developing emergent probes in IM interviews can be easier than in email. (Kazmer & Xie, 2008, p. 259)

As Kazmer and Xie (2008) acknowledge, IM interviewing allows for essentially perfect transcription, since all interactions can be stored in logs and entire IM windows can be saved as HTML files. Additionally, this logging produces a data bank that is already clean, organized, and digital, making computer-aided analytic methods simple to execute. Critics of mediated interviews worry that affective data may be lost that may have existed in face-to-face interviewing. This is partially true, because nonverbal cues, facial
expressions, and tone of voice are lost in the mediated environment. However, Kazmer and Xie (2008) note that participants are still able to express themselves in IM interviews, but that this expression occurs through online written conventions, such as emoticons, font changes, italics, bolding, and other methods (pp. 272-273). In fact, the anonymous veil afforded by the Internet could even encourage participants to feel less inhibited and express themselves more honestly, emotionally, and directly (Suler, 2004).

A notable downside to IM interviewing is that the researcher and the participant do not necessarily have to devote undivided attention to the questions being asked. In my experience interviewing in another online study (Brabham, in press), for instance, there were times when, due to scheduling preferences of participants, I conducted two IM interviews simultaneously. Likewise, because of some pauses in the conversation, it was clear that some participants may have been distracted in the middle of interviews. This split-attention surely can diminish the quality of responses to questions, though it could be as easily argued that these delays in responses allowed participants to develop more thoughtful responses. In face-to-face settings, the in-person expectations may have made it awkward for participants to take excessive pauses while answering questions. In essence, IM interviewing is merely a different qualitative approach, with its own set of strengths and weaknesses.

Based on my own substantial experiences in online communities since the mid-1990s, I would consider IM interviewing, and possibly also e-mail interviewing, the only appropriate methods for contacting a person I had met online. To phone or meet face-to-face with an online friend is an extremely intimate gesture, and to suggest a phone call or a face-to-face meeting with someone at an inappropriate time would be a turn-off for the
participant and would be seen as even a bit invasive. Furthermore, I would argue that it would take someone quite experienced in the norms and written expressions of IM to conduct quality IM interviews, and my decade of experience with instant messaging was a benefit to my study.

Participants were recruited from those who indicated a willingness to be contacted for a follow-up interview during the registration process on the Next Stop Design Web site. Out of 3,187 registered users, 950 indicated they were willing to be contacted for a follow-up interview, or 29.8%. Understanding how the diverse participants at Next Stop Design, some who submitted designs and some who just voted, perceived the effectiveness of the project in terms of public participation required a sample of interviewees that captures this breadth of participation. Likewise, it was important to interview a mixture of participant types to fully understand the range of motivators relevant to the project. Thus, the research questions guiding the study necessitated a quota sample for interviewing. To gather a fair variety of interviewees, the quota was proportional such that the actual interviewed sample more or less reflected the makeup of registered users.

The proportional quotas I used to determine my sample from the population of registered Next Stop Design users willing to be interviewed (n = 950) related to the scope of my study. That is, participants’ perceptions of Next Stop Design as an effective online deliberation tool are likely affected by their level of involvement on the site. Participants who submitted several designs, participants who won the competition, and participants who merely registered and cast a few votes on the site may all perceive the project differently. Thus, to address RQ1, my quota include a proportional mix of more involved
and less involved participants. One’s previous experience in public participation meetings
and one’s bus ridership also factor into perceptions, so a proportional quota was also
sought here. Likewise, RQ2 focused on the motivations of participants. A mix of
participants in these ways, according to involvement on the site and previous ridership
and public participation experience, was pertinent for RQ2. Finally, across the whole
sample, I sought proportional representation of registered users based on demographic
factors.

Participants were sent an e-mail to the e-mail address they supplied during
registration. This e-mail asked the participant to click on a URL to fill out a brief
interview scheduling form. The URL took the participant to a simple online form. This
form asked participants to supply preferred times to be interviewed, as well as preferred
IM services and screen names. Since Internet users rarely schedule their time spent using
IM programs, an option to “feel free to contact me if you see me logged on” was offered
in the scheduling section of the form. This allowed me to reach out to attempt an
interview any time I saw a participant online. Participants submitted the form and I
received their scheduling preferences and screen names.

Once scheduling was complete, I began conducting interviews. The first IM I sent
to a participant introduced myself as the investigator in the study, and I asked if they
were willing to begin the interview. If they agreed, I reminded the participant that their
responses will be used for research, their identities kept confidential, reported findings
made anonymous, and asked if they have any additional questions. Following these
opening exchanges, the interview questions commenced. These exchanges remained true
to the conventions of instant messaging, with an informal and courteous tone.
In light of the discussion in Chapter 2 regarding Noveck’s (2003) 11 ideal features for online deliberative democratic processes, interview questions operationalizing concepts related to RQ1 were designed to elicit responses from participants according to those. A general opening question asked if participants thought the project was effective, and their initial answer helped open this discussion and direct me to more detailed follow-up questions stemming from the ideal features. To understand if the participant found the site accessible, for instance, I asked if the participant found the site easy to access, use, and understand. To understand if the participant perceived the project as transparent, I asked if the participant understood the rules of the competition, what agency the competition aimed to benefit, and how voting worked. The Appendix shows the full slate of interview questions used in the study.

Given the discussion in Chapter 2 regarding the nine broad motivational categories I distilled from the literature on uses, gratifications, and motivations, interview questions operationalizing concepts related to RQ2 were employed. Like the line of inquiry I used to address RQ1 with participants, for this series of questions, I opened with a general question asking why participants chose to get involved on the site. The response to this general question funneled my inquiry into detailed follow-up questions relating to motivations. For instance, if a participant indicated a desire to further his or her career through participating in the project, I followed up with more specific questions about how and why the participant saw the site as a career-building opportunity. More nuanced findings here at times pointed to a participant’s desire to use his or her experience on the site as a way to build a resume or portfolio for future paid work. All of these motivators and their attendant questions are addressed in the Appendix.
There was not a rigid plan for the order or wording of questions. The interviews were semistructured and proceeded like comfortable conversations where themes emerged through questions and specific probes, rather than proceeded like a survey with multiple choice responses. I identified broad themes on the fly as a way to direct my line of questioning to more specific probes relating to Noveck’s (2003) 11 ideal features or my distilled list of nine broad motivators. Because some concepts are closely related, I took care to ask specific questions of participants to clarify their positions. For example, if a participant claimed that one of his or her motivations for participation on the site was career advancement, I was sure to drill down into that issue to find out if in fact the participant saw the site as a way to get future work or as a way to develop skills and knowledge to make him or her a better candidate for a future job. It could be that both reasons were true, or it encouraged the participant to be more specific about his or her involvement on the site.

The IM interviews produced an automatically time-stamped transcript collection. Data analysis was an ongoing process, and I made marginal notes and other commentary in the digital transcripts after completing each interview. In a process similar to what Miles and Huberman (1994) and Lindlof and Taylor (2002) describe, these notes were helpful in developing emergent codes, which I then distilled into broad themes. It is unlikely that new themes emerge after the first dozen or so interviews, and in this study, no new themes were discovered after the thirteenth interview. Guest, Bunce, and Johnson (2006) found that theme “saturation” in qualitative interviewing typically occurs within the first 12 interviews and metathemes appear as early as within the first six interviews. I anticipated that 20 interviews would capture all themes for the two research questions in
the study, and my proportional quota sample initially took place within this 20 interview target size. A total of 23 interviews were conducted in the study.
CHAPTER 4

ANALYSIS AND DISCUSSION

In this chapter, I present the results from interviews conducted via instant messenger (IM) with participants from the Next Stop Design competition, unfolding according to the research questions for this study. I begin with a general explanation of the data collected. Then, I address the issue of deliberative democratic process, examining participant responses and themes from the interview transcripts against the backdrop of Noveck’s (2003) 11 ideals. Next, I turn to a discussion of themes relating to participant motivation on the site, including a discussion of the unpredicted theme concerning low barriers to entry, ease of use, and the appeal of the Web site design. I conclude the chapter with a discussion of participants’ general impressions of the Next Stop Design project and the potential for crowdsourcing in future government projects.

Participants were asked questions related to their perceptions of the project as an effective online deliberative democratic process and questions related to their motivations for participating in the competition. I analyzed the data looking for emergent themes from interviews with 23 participants. In an effort to discover whether Noveck’s (2003) 11 ideal features of online deliberative democratic process were perceived by participants, I found that many of those features did turn up. Notable exceptions included the concepts of facilitation and equality and responsiveness, which participants felt were questionable due to apparent voting manipulation and “popularity contests” on the site. Regarding
motivations, themes indicate that participants primarily engaged with the project because it offered an opportunity to advance one’s career, it was enjoyable, and it offered an opportunity to learn new skills and knowledge.

**Summary of Interview Data Collected**

Participants for this study were drawn from the registered user database for the Next Stop Design competition from summer and fall of 2009. During the registration process, users could opt-in to being contacted for a follow-up interview at a later date to discuss their experiences on the site. Of the 3,187 registered users, 950 (29.8%) agreed to be contacted for a follow-up interview. Because an interview sample was sought that represented the diversity of all registered users on the site and represented the very uneven landscape of general activity on the site, a proportional quota was crafted. The entire registered user database was analyzed and labeled according to design submission rates, voting activity in the competition, geographic location, and previous public participation meeting attendance. Figuring the make-up of the entire database made sampling from the pool of 950 potential interview subjects in a similar quota relatively simple. Eighty individuals from the pool of 950 were contacted for an interview, 36 signed up for an interview, and 23 followed through with the actual interview.

Of all 3,187 registered users, only 231 individuals (7.25%) submitted a bus stop design in the competition. This means that the vast majority (92.75%) of registered users did not submit a design. In terms of voting, 1,928 users (60.50%) cast at least one vote in the competition, meaning that nearly 40% of users did not. Of these 1,928 users who did vote, 1,166 (60.48%) only cast one vote in the competition. Users who voted between 2 and 10 times comprised 26.35% of the voting base and 15.94% of all registered users on
the site. Only a total of 254 users cast more than 10 votes in the competition, which
amounts to merely 13.17% of all voting users and 7.97% of all registered users. This kind
of make-up is not uncommon for a Web site supported by user participation and user-
generated content. Jakob Nielsen (2006) suspects that participation online follows a “90-
9-1 rule” in that 90% of individuals lurk on a site and do not contribute, 9% are
occasional contributors, and only 1% contribute most of the content on a site, a
phenomenon that has been confirmed in a study of Wikipedia contributors (Anthony,
Smith, & Williamson, 2007).

Because of this inequality in participation on the site, I sought a mix of very
active, somewhat active, and less active participants to interview about their experiences
on the site. The participants interviewed for this study did not resemble the proportions of
the entire database of registered users perfectly, but there is diversity among them in
terms of activity. More of the highly active participants, both in terms of design
submission and voting, responded to my request for an interview. This is likely due to
participant self-selection and results in sampling or response bias (Creswell, 2009), an
issue that is common in online studies (Hewson & Laurent, 2008; Rasmussen, 2008;
Suler, 1996). Less active participants on the site may not have seen a reason to agree to
an interview given their scant activity. Nonetheless, the resulting group of participants I
interviewed did fairly accurately resemble the entire database of all registered users in
terms of geographic diversity, age, frequency of public transportation use, and previous
attendance at a public participation meeting, data that are represented in Table 2. Notably,
only 4 of the participants were women. This is most likely attributable to the large
numbers of architects participating in the competition and the relatively low numbers of
women in the architecture profession. For instance, a 2009 study by the National Architectural Accrediting Board found that 41% of graduates of architecture programs are women; an American Institute of Architects (AIA) study found only 20% of licensed architects were women; and another AIA report found that only 27% of staff in architectural firms in the U.S. were women (Gregory, 2009). I discuss this issue further and the effect it may have had on this study in Chapter 5. Table 3 provides the basic details for the participants interviewed in the study.

Nearly every major IM client was used to conduct these interviews: AOL Instant Messenger, Windows Live Messenger, Yahoo! Messenger, Skype, Google Talk, and iChat. One participant from Venezuela wanted to conduct his interview in Spanish using Yahoo!’s Babelfish free online translation service. Such free online translation programs, while handy for bridging language barriers in casual interaction, are inappropriate for research studies. These services are stymied with translation errors that greatly affect the meaning of a conversation (Yates, 2006), are useful for conducting online interviews only if the interviewer is already fluent in the language and corrects errors in the automatic translation (Bampton & Cowton, 2002), and do not meet the standards for translation of materials into foreign languages established by institutional review boards. Thus, this interview was not included in the study. The 23 interviews were conducted over the course of 16.5 hours in March and April 2010 and generated a corpus of 83 pages of single-spaced transcripts for analysis.

For the purposes of this study, all interview transcript excerpts are presented without correction, as true as possible to the expressive capabilities available to participants (including capitalization); the limitations of mediated synchronous
Table 3

Basic information about interview subjects

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<th>Participant*</th>
<th>Sex</th>
<th>Age†</th>
<th>Hometown</th>
<th>Public transit use frequency</th>
<th>Ever attended a traditional public meeting?</th>
<th>Number of designs submitted</th>
<th>Number of votes cast</th>
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* Letters have been used to represent participant names to protect individuals’ identities.
† Participant’s age at the time of the competition’s closing on September 25, 2009.
communication; and the limitations of the specific IM program used for interviewing.

There are a number of grammatical, spelling, punctuation, and capitalization errors present in the transcript excerpts, and these have been maintained to remain true to the participants’ words. Each discrete message is displayed in its own line of text. Use of brackets in the manuscript indicates either unimportant commentary omitted by the author or the participant’s intended edits that I compiled for ease of reading. In the latter case, for example, if a participant types “shortwhiel” in one line, but immediately follows it up with “short while” in another message, it is understood that the participant intended to correct his or her spelling error in the previous message, per the norms of IM conversations. In a case such as this, “[short while]” is included in place of the initial instance of misspelling. In other words, interview transcript excerpts below are mostly unedited in terms of mechanics and style, and they contain many mechanical errors that were present in the raw transcripts.

Themes Relating to Ideal Features of Online Deliberative Democratic Process

According to Noveck (2003), the 11 ideal features of online deliberative democratic processes are in play when a project is accessible, free of censorship, autonomous, accountable and relevant, transparent, equal and responsive, pluralistic, inclusive, informed, public, and facilitated. Interviews with Next Stop Design participants revealed that most of these features could describe the Next Stop Design project in a positive light, though the project seemed most deficient in terms of its facilitation, how participants perceived the competition as equal and responsive, and the accountability and relevance of peers on the site. Most of these perceived deficiencies stemmed from
two major issues: 1) perceptions of cheating and “popularity contests” and 2) flaming in comments on individual design submissions. I explore the 11 themes in logical groupings below.

Accessible and Informed

The accessibility of the site was the most frequently mentioned feature about Next Stop Design. Generally, comments relating to this feature were positive, many of the participants praising the site’s design and ease of use. The following comments illustrate this praise.

Participant H: I think the scope was quite clearly defined, and the goal was clearly laid out.

Participant J: The site was easily accessible which added to its effectiveness.

Participant R: the web site was pleasently lucid, handy, easy.

Some participants mixed praise for the accessibility of the site with some suggestions for improvement, however.

Participant Q: The website was easy to use
Participant Q: Very user friendly
Participant Q: The only downside I would say was that the requirement of the registration of the voters
Participant Q: Which I understand it is necessary for the records
Participant Q: But takes 5 minutes which may discourage people to vote.

Participant T: I wish only the images were a little bigger
Participant T: So anyone could see more clear the general idea of the projects.

If accessibility is the idea that an online deliberative space should “be available to as wide a range of participants as possible” (Noveck, 2003, p. 12), then Participants Q and T point out that the site may have presented a burden on some participants. Participant Q’s concern is that the registration form, which was required to do virtually anything
participatory on the site, may have been a bit long and demanding, especially for someone less familiar with English or someone who has little time to invest in new Web sites. Participant T’s concern is that images representing design submissions needed to be bigger, something with which older people or those who have difficulty seeing might struggle. Images could be clicked, which then enlarged them one by one on the screen. It is unclear whether Participant T was aware of this enlarging function, and it certainly means the enlarging function should have been more prominently displayed on the site. Aside from these two comments, nearly every participant explicitly mentioned that the site was easy to use and they had no problem navigating the different functions of the competition.

The issue of accessibility, however, is called into question a bit due to various “digital divisions,” inequalities concerning Internet access (Birdsall & Birdsall, 2005; Fox, 2005; Jones & Fox, 2009; Warschauer, 2002). Because Next Stop Design was an Internet-based project, it was not accessible to a significant number of Americans and an even larger number of individuals worldwide; according to a January 2010 report from the Pew Internet and American Life Project (Rainie, 2010), 74% of Americans age 18 and older used the Internet, and an aggregation of several reliable studies in December 2009 (“Internet Usage Statistics,” 2010) reports a worldwide estimated Internet use of just more than 26%. This impacts the quality of the appraisal of Next Stop Design as an effective deliberative democratic process. As an online deliberative democratic process, it is effective in terms of accessibility, but because the medium of the Internet excludes, it cannot truly be called an overall accessible tool for deliberative democracy. This is why
crowdsourcing, no matter how well executed, should never supplant traditional public participation methods. Rather, crowdsourcing should complement traditional methods.

A participant feeling informed in his or her interaction with an online deliberative process is a related concept to accessibility. Again, most participants indicated a level of satisfaction regarding the availability of information on the site.

Participant L: it was pretty easy
Participant L: to get the information you were looking for

Participant N: the information available it seemed to me appropriate to the objectives, for me it was a contest of ideas despite the fact that some proposals were conceptual and others were more developed, in general terms that information allowed the development of the idea requested.

Participant G: I thought the site was very engaging and gave a good description and excitement for the project/

Participant W: The site was really easy to use, easy to upload and to vote as well. The rules were clear as well.

However, just like with the issue of accessibility, two participants expressed a mixture of praise and criticism regarding the quality of information on the site.

Participant C: Hmm. Yes i can say that it was easy to use. But i also think that the datas about the zone should be more easy to access.

Participant H: I think the scope was clearly defined, and the goal was clearly laid out. I think that more information could have been given as far as the use/ intended multiples uses for the project though. Give more examples sites could have been a benifit as well. Overall the information was good though.

Further conversation with Participant C revealed that he wanted more information about the actual terrain the proposed bus stop was to be built upon, and Participant H would have liked more information describing the importance of the specific bus stop in the entire transit system, the amount of pedestrian traffic, ridership, and so on.
Generally speaking, the Web site performed well in the opinion of participants regarding accessibility and quality of information, but there is certainly room for improvement. What is most remarkable about the interview process with participants, and which can be seen in the comments from those participants offering criticism, is that they came forward with constructive suggestions for improvement. That is, participants interviewed for this study were quick to identify what was lacking, pointed out the flaws, but then also offered very helpful tips for making a future project better. This constructive criticism is apparent in transcript excerpts throughout the remainder of this chapter, and it demonstrates that participants saw themselves as active agents in the business of the site, both at the specific level of the competition and at the meta-level of the concept of the study. This quality, autonomy, is discussed in the next section.

**Autonomous, Free of Censorship, and Transparent**

I discuss the features of autonomy, lack of censorship, and transparency together because these concepts connect neatly. Online deliberative processes are autonomous when participants are treated as “active participants in a public process” rather than “passive recipients of information” (Noveck, 2003, p. 13). Lack of censorship as a concept is fairly self-explanatory, and transparency means that participants are aware of the rules governing the deliberative process, whether there is monitoring on the site, and what entity stands to benefit from the process. I connect these three concepts in a single discussion because they all deal with participant agency—the ability for participants to act freely, express themselves, and understand their relationship to the governing authorities over the project. Interview data indicated that autonomy and lack of
censorship were realized through the Next Stop Design competition, but transparency was only mentioned by a single participant.

Several participants acknowledged their role as active agents in a public process rather than merely observers, and many participants spoke positively about this empowerment.

Participant W: I believe it is very important to activate citizens. More that, the more ideas the better. At the moment in Athens Greece there is a competition about a bench. Anyone can participate. What s better than having the citizens of your city designing for you, not just the professionals, Everyone!

Participant G: I like it to participate even it wont make a difference.
Participant G: it feels good to have my voice be heard.

Participant G expressed mixed feelings regarding autonomy. On the one hand, he enjoys the ability to make himself heard through the competition, but he expresses doubt about his ability to affect the process in a meaningful way.

In addition to making his voice heard, Participant G also noted that he did not perceive any censorship on the site. In fact, he even stated that censorship rarely had a place in such a public project, except in cases of obscenity.

Participant G: I feel the comments shouldn't be censored unless they are being extremely vulgar.

Other participants felt similarly about valuing free speech on the site.

Participant L: I do like the idea of expressing freely...It is rewarding for the one participating and for those who aren’t.

Participant H: The presence of any censorship was difficult to sense.

Participant Q: in the absence of an actual jury
Participant Q: I felt very free
Participant Q: And I did not feel censored at all because people were able to comment on your design
Participant Q: way before it was awarded
Participant Q: So the minute you put it, you knew whether it was right or wrong project for the given task.

There was no software architecture in place to prevent certain forms of speech on the site. Participants were free to write all manner of words on the site without the interference of profanity filters, and no participants were censored by the Next Stop Design team based on anything they produced for the site. During the competition, the team received no complaints or requests to take down offensive comments from other participants, though it became evident during these interviews that some participants found flaming commentary annoying and not helpful. I am unaware of ways the site censored anyone, and participants seem satisfied in this regard.

Participant Q indicates that knowing the competition was determined by popular vote rather than by a jury of experts was a “freeing” experience for him. He elaborated on this and was thus the only person interviewed for this study that touched on the issue of transparency in any real way.

Participant Q: I entered this because everytime I run for competitions I know that there are no limiting factors like real clients
Participant Q: I knew this was a research program which provides more freedom.

No other participants seemed to outright indicate that they were aware Next Stop Design was primarily a research program, and no one explicitly acknowledged that the Federal Transit Administration (FTA), or the U.S. government in general, was funding the project. Most participants were aware that the bus stop was to be built for Salt Lake City, but despite the prominence of FTA, Utah Transit Authority (UTA), and University of Utah logos on the Web site, only Participant Q seemed to address the issue. This is potentially a concern for future projects like Next Stop Design. As danah boyd (2008, 2010) has pointed out, social media users willingly and unknowingly provide private
information to social media Web sites, such as Facebook, and these sites are not always good stewards of such information. This information is used to target advertisements to social media users at minimum, and in some cases information is sold to third parties or is not adequately safeguarded against malicious hacking. Largely information illiterate in regards to privacy and primarily due to a lack of transparency from social media sites, many social media users willingly consent to having their sensitive information harvested in exchange for the site’s services. By extension, project managers for publicly funded social media ventures like Next Stop Design ought to make transparency a priority. Users who visit sites to participate in the public business of a government entity ought to know what is going on. I am concerned by the lack of participants who seemed aware of Next Stop Design’s larger purpose as an experiment in public participation for FTA. However, given the many logos, the registration process and waiver, and the “About” page on the site, I am unsure what more could have been done to educate participants about the greater purpose of the project. It is my feeling that the majority of participants saw the project as a bus stop design competition and nothing more.

Pluralistic and Inclusive

A pluralistic online deliberative space guarantees that “viewpoints representing a broad spectrum are clearly expressed” (Noveck, 2003, p. 15) and an inclusive space means that there is opportunity for all viewpoints to be heard. The two concepts are very similar, but pluralism emphasizes the importance of entertaining differing opinions while inclusivity simply invites diverse opinions. Architecturally, the Web site allowed anyone to access the site who knew about the project’s existence and had access to an Internet connection capable of loading the site. No barriers were put in place through
technological means or rules to deny anyone the chance to participate. Indeed, the immense international involvement in the project suggests that people worldwide saw the site as a place where their opinions and designs were welcome. Yet, there is a known instance of exclusivity in that the site was U.S.-centric.

Many participants commented on the diversity of opinions represented on the site, and the following excerpts illustrate this sentiment.

Participant K: Everything I saw ranged from minimalist and simple to outrageous and unrealistic. I thought it was good to find a nice array of ideas and themes.

Participant N: I think it was a very novel and revolutionary idea for our field and the results are evident with the number of proposals received from all over the world, was a global competition, we show this page to a client, asked me precisely what the design of the stops to participate and was impressed by the diversity.

Participant W: My general view is that the competition had almost everything, amateur to professional design, and that was very interesting. More than that it was obvious that the projects came from different design backgrounds and the multicultural of the competition was Participant W: the strongest point.

Participant O: It was interesting to see the wide range of submissions - especially seeign children getting involved in the design process Participant O: that is encouraging

Some participants saw the variety of design styles as an indicator of diversity on the site, some saw the international involvement as a sign of diversity, and some saw the mix of amateurs and professional designers and architects as an indicator of diversity.

Participant G: I like that it wasnt limited to professional engineers or other professionals.

Participant B: I thought it was an intriguing way to gather ideas from a diverse audience. The quality may have been very up and down, especially early on I think, before 'real designers' cottoned on to the site and the project's parameters.
Participant F: everything from cocktail napkin sketches to high-res renderings.

Still another participant mentioned that the project brief, the description of the parameters of the bus stop design competition, was inclusive from the start.

Participant B: Lots of good consideration given to the need for inclusiveness in the project brief, too, BTW.

Participant B: My husband uses a wheelchair, and was one of the submissions particularly addressing that issue of access, so we paid attention to such things more than other folks might have.

Ryan E. Smith, an assistant professor in the University of Utah School of Architecture, crafted a list of design considerations for the project brief on the site. These design considerations included an emphasis on the eventual bus stop to be accessible to people with disabilities. While such a design consideration is mandated by U.S. law, for Participant B and her husband, it was a welcome nod toward inclusivity in the brief and may have helped other participants acknowledge diverse abilities in their designs.

However, despite the few mentions in interviews about inclusivity and the Web analytics and registration data to suggest international interest in the site, it is important to remember the U.S. slant of the project and how this made the project a bit exclusive from the outset. The Next Stop Design Web site was in English and the registration process included a question about race/ethnicity with distinctly American categorical constructions. These and other U.S.-centric markers likely worked to exclude at least some visitors to the site, and the discarded interview with the Spanish-speaking participant mentioned earlier in this chapter is evidence of some of this exclusivity. These interview data, unfortunately, cannot account for these missing voices, and I consider this claim of inclusivity in light of such missing voices. Future studies would
surely need to be designed from the beginning to be internationally inclusive and multilingual.

**Accountable and Relevant and Public**

Noveck (2003) acknowledges that her ideal of accountability and relevance is the most “controversial value-choice and one that is surely not appropriate for all purposes” because it means that individuals ought not be anonymous to one another (p. 14). Suler (2004) suggests that anonymity online makes individuals feel “disinhibited,” for better or worse, and in the best case for an online public participation process, this could mean that a shy individual or one who might fear retaliation for speaking out would at last find a way to contribute to the good of the common project. But Noveck (2003) asserts that participants “must express themselves publicly as members of the community of dialogue” and be accountable for their contributions in order to have productive deliberation (p. 14). This is a point of tension and one that manifests in the architecture of an online space. Siding with the productive potential in one’s online disinhibition, Next Stop Design was constructed so as to allow users to remain anonymous to one another during the competition. Anonymity was also a preference of the University of Utah’s Institutional Review Board (IRB), which governed the study’s human subjects components and closely scrutinized the registration process proposed in the early stages of the project. In terms of accountability and relevance, then, participants seemed mixed; some valued the ability to remain anonymous and some thought anonymity destroyed accountability, encouraged rampant flaming, and made the competition not worth participating in any further. First, here is some of the more positive commentary on this issue:
Participant G: I felt they were accountable.
Participant G: As far as I could tell there were no hidden agendas.

Participant I: I think the anonymity probably works well for those who are timid about their drawings or images.

Participant O: I am sure that a lot of people who voted or commented knew someone who entered and probably knew which design was theirs even if it was anonymous online...so in that sense no [there was not a cover of anonymity].

Participant O: I also think that the more people that vote, the truly deserving project will rise to the top.

Participant O: So I don’t know if there is a need for accountability.

Participant S: I think it made people say what they were actually thinking and give a fair critique. But I’m certain some took it the wrong way and were less accountable. I didn’t care whether or not some liked what I wrote or if my vote was going to make them win. I voted or tried to vote based on design.

Participant O doubted whether anonymity was really available to participants in the first place, since he suspected many people on the site came to the site to vote for a friend’s submission. Still, he trusted the voting system to level out any effects of exposure on the site and bring the deserving design to the top of the heap. In other words, Participant O thought the voting mechanism itself allowed for accountability, even if individuals were technically anonymous to one another on the site. Another participant explicitly addressed this veil of anonymity and what happens when one steps out from behind it.

Participant M: I felt anonymous as long as I didn’t post comments. However, comments were linked to registered users (if I remember correctly) so my comments about other designers’ (who may have been super-sensitive to critique) submittals I believe led to some malicious backlash for my submittal.

Again, participants who noticed flaws in the design of the site were ready to offer suggestions for improvement, as Participant D demonstrates below.
Participant D: One of my commenters specifically mentioned that he was posting designs under one account while commenting under another one to keep safe from “retaliation”.

Participant D: An unfortunate side effect of anonymous accounts.

Participant D: I am a fan of less anonymity when it comes to something publicly funded with a potential for actual construction. User profiles with voting records would go a long way in that direction. Also having tiered accounts ala Amazon’s “verified” status for people willing to submit to a higher standard of openness about their identity with the organizer, but still remain anonymous to the public.

Participant D: And when I am feeling medieval, a public outing of cheaters.

Participant D’s suggestion to follow Amazon’s lead with accountability is astute.

Johnson, Crawford, and Palfrey (2004) explored the notion of accountability in Internet governance and suggest that reputational rating systems allow individuals the opportunity to make peers accountable to one another while still remaining anonymous. As is the case at Amazon, as well as eBay, some news sites, and many other popular sites, an architecture exists that allows peers to assign ratings to one another’s anonymous screen names based on the value that individual brings to the commons in some way. At eBay, for instance, reputable sellers encourage their buyers to leave feedback about the transaction, and the more positive feedback and experience with numerous transactions, the more prestigious that user’s accompanying star icon becomes. And depending on the site, various reputational icons may become keys to allow certain behaviors and functions on the site, keeping less reputable individuals from engaging in some of the more visible and important business of a community until they have earned their stripes. If a community recognizes these kinds of merit badges and reputational seals in the form of peer-voted icons on screen, then a functional system exists that holds individuals accountable to one another without requiring them to disclose their identity. This is a distinction between authentication and identification (Johnson et al., 2004).
Unfortunately, Next Stop Design was not built to allow this kind of system. Had it included such a system, presumably the project would appraise better in light of Noveck’s (2003) 11 ideals for online deliberative democracy.

Perhaps in part because participants were anonymous, some perceived the process as not remaining true to the ideal of being public, which is a focus on collective interests rather than individual interests or the interests of specific groups. Participant E felt the process was hijacked by individuals who recruited friends to inflate their votes, resulting in a kind of special interest group of sorts.

Participant E: this falls into the black hole of the facebook genre. The positive/negative people always tend to be influence by others and if you want someone’s true opinion the comments will prob sway that statistically in one direction or the other. But, then again you might want that, kinda gives a middle school edge to the thing. Vote by mob.

Participant E: Does Bob get 200 of his friends that are part of his soccer to team vote on him and what are their background?

At least 6 other participants had similar opinions.

Participant V: People with a lot of contacts get their friends to vote and whoever has the biggest network gets the biggest number of votes.

Participant K: each project came down to how many friends/colleagues were also involved in the voting. I know that the only reason I submitted any votes was because my room mate participated and I wanted to help him win.

Participant B: frankly it feels like the person with the biggest Facebook following is the one who wins, simply by gathering more pals to vote.

On the one hand, it could be argued that special interest groups have always dominated traditional public meetings, coordinating large showings at hearings and commissioning experts to intimidate everyday citizens (Hibbard & Lurie, 2000). Next Stop Design simply replicated this less-than-ideal situation online in this competition. On the other
hand, it could be argued that something public and for the common good is really just something that a plurality of special interests agrees to. In other words, the distinctions between special interests, influence among personal networks, and the commons may be artificial or irrelevant in the scope of public involvement. What is the difference between politicking to win influence and backing the most influential idea? And could anything truly be done in a technological/architectural sense to protect against this in an online space? I am inclined to think the ideal of being public in an online deliberative space is not something that can ever truly be guaranteed by the moderator or architect of a Web site. This ideal seems to reach beyond the control of a designer of a deliberative space and seek to dictate ideal behaviors for citizens involved in the process. On a practical level, though, whether this ideal was achieved in the Next Stop Design case was doubtful in the eyes of participants interviewed for this study.

Facilitated and Equal and Responsive

Perhaps the most controversial feature of Next Stop Design was the voting mechanism. The Next Stop Design team identified cheating in the competition early on, and a methodology involving IP addresses, geo-locations, voting patterns, and other means was developed to identify these abusers. Twenty individuals were found to have been responsible for dozens of junk e-mail accounts and multiple registrations. Multiple registrations were not allowed according to the Terms of Use on the site. These individuals manually cast thousands of votes for specific designs and against all other designs. In all, these 20 cheaters accounted for 27.6% of all votes in the competition. Once identified, the fraudulent accounts were deleted, along with their voting histories. Some, but not all, of the more inflammatory comments on individual designs were the
result of these individuals. Comments from these users were left up on the site, because they elicited responses—and sometimes eloquent defenses—from other participants, and to delete the offending comments would leave the running dialogue without context. Once the fraudulent votes were removed from the competition, the legitimate 11,058 votes remained, which determined the competition winner. The best hackers go undetected, so we cannot be entirely sure we spotted all fraudulent activity. However, we are confident the vast majority of fraudulent activity was accounted for, and because of an extra level of scrutiny paid to the top ten ranked designs, we are confident the winners are deserving.

The problem with this voting manipulation throughout the competition, and the various rounds of purging we underwent, is that participants on the site perceived that the site had been compromised and were at times unsure whether the Next Stop Design team was doing anything about it. This caused a real problem for the legitimacy of the project as a whole, and these incidents reflect poorly on the ideal concepts of facilitation and equality and responsiveness. Because the team did not actively moderate content on the site, the voting and commenting mechanisms alone became the point of facilitation in the process. And because of the questionable voting patterns, many participants felt that some individuals were receiving unequal treatment and exerting unequal influence in the process.

Participant S: I thought that it was a good way to try and vote on some ones piece but I am sure people didn’t vote fairly or voted many times.

Participant C: You know people can cheat easily on the internet.

Participant D: I was excited at the beginning, but lost interest later on as it became obvious that people were gaming the ratings, but was not
yet obvious that you would be moderating the effects of the intentional low-rating of competing designs.

Participant F: I think there was a leak with the voting process
Participant F: it allowed ‘trollers’ a chance to swing things an unfair way.

Participant I: with the voting – I’m fairly certain that it would be relatively easy to skew the voting - by voting for your friends, or using multiple accounts, etc.

Even Participant G’s comment in a previous section of this chapter, that he felt his participation would not “make a difference,” may indicate a lack of confidence in the facilitation mechanisms on the site. In an effort to be transparent, details about the cheating, how cheaters were identified, and what actions were taken to delete fraudulent votes were posted to the front page of the Web site at the conclusion of the competition accessible through a link labeled “If you’re curious: why the decrease in rating counts.” It is unclear through the interviews with participants whether these voting adjustments were known by participants. When I mentioned the action the team had taken to participants during interviews, they often seemed as though they were just finding out about the fixes we had implemented.

Still other participants perceived inequality among users on the site along different lines. Some, as discussed above, expressed concern about the influence of individuals with large networks of friends to vote for their designs. But inequality was also perceived in terms of how designs were presented on the site. The design rating gallery during the competition featured most recently added designs first, at the top of the page. Older designs were pushed toward the bottom of the page. Though users had the ability to sort design submissions according to a number of criteria, the more designs that were submitted, the less likely it seemed that a new visitor to the site would take the time
to explore all designs, and especially the older designs toward the bottom. Also, the longer a good design stayed on the site, the more time it had to attract negative feedback. Because of this, designs submitted later in the competition were perceived to have an advantage by some interview participants.

Participant K: it seemed to me that the earlier a project was submitted (and especially if it was a competitive design) the more it was voted down by competing users
Participant K: so because of that, it was more advantageous to submit in the last two weeks. And i feel like a few of the top 5 projects were around that time and didn’t have as much of a chance to be voted to the same level of scrutiny, whether it was legitimate or just an attempt to increase your own chances.

Participant M: I think the voting process had a timeline that was way too long. I think an unfortunate result was the development of alliances between designers (via comments), and also that submitters toward the end seemed to have an edge over earlier submittals, perhaps because the newest submittals got the most attention as the voting came to a close, although I really don't know.

Participant B: You almost hope for a randomizer to bring ideas to the front page for a revisit once in a while...
Participant B: it’s like the ‘most emailed’ or ‘most viewed’ box on a newspaper’s home page.
Participant B: They sometimes get all that airplay just because everyone clicks on that box!

In step with other constructive criticisms received during these interviews, Participant B offers a good solution for future competitions like Next Stop Design. A randomizer would ensure that all designs, no matter when they were submitted, would get an equal chance to be seen in the flood of designs. Or, as a few participants suggested, there could be distinct phases between submitting designs and voting—two rounds so that users had to see the whole collection of designs before casting votes.

Participant W: The only thing I would change would be the timing of uploading the projects. I think it would be better if all of them were given to public at the same time so that people would see them at once.
Most of Noveck’s (2003) 11 ideals for online deliberative democracy seemed to be met through the Next Stop Design project, according to interviews with participants; however, there is plenty of room for improvement. Participants mostly perceived the site to be accessible, informed, autonomous, free of censorship, pluralistic, and inclusive. In terms of transparency, participants mostly did not seem very aware of the overall research goals of the project and did not specifically mention the organizations that stood to benefit. With voting irregularities, especially, the efforts by the Next Stop Design team to remain transparent about its fraud detection policies seemed to go unnoticed. This does not necessarily mean the project was not sufficiently transparent, just that participants did not seem to take note of what was being made transparent for them by the project team.

Concerns over both flamers on the site and cheating in the voting process by a handful of individuals called the ideals of equality and responsiveness, accountability and relevance, facilitation, and being public into question for participants interviewed for the study. That users could remain anonymous on the site encouraged, in some participants’ opinions, unproductive, selfish, and mean-spirited comments on designs by some users.

Perceptions about voting fraud affected many participants’ faith in the quality of the facilitation mechanisms. And the fact of open voting in the competition paired with perceived rapid fluctuations in the rankings led many participants to assume that the competition was more a “middle school” popularity contest between large networks of friends than a serious design competition. All of this called into question the perception that the project was truly being executed with the common good in mind.

It is fair to say that Next Stop Design was far from perfect in living up to Noveck’s (2003) ideals for online deliberative democracy, but it is clear to me from
discussions with participants that the project held some promise as a public participation tool. Where the project was deficient in these ideal features, too, participants were quick to recommend fixes. On this last point, it may be that participants were effectively engaged in a meta-participation process to refine the tool itself, even if they did not fare well in the bus stop design competition. This drive to participate in the refinement of the online deliberative tool may be the most remarkable outcome of this study.

**Themes Relating to Motivations**

Of the nine motivational categories identified in Chapter 2, three did not surface at all in interviews with participants: to make money, to meet new people and socialize, and to pass the time when bored. Since there was no financial prize offered to the winner of the competition, it is understandable that participants did not see their activity on the site as generating direct income. Second, participants did not see the site as a way to meet new people or socialize primarily because Next Stop Design was never designed to be a social space. The purpose of a social site like Facebook more closely aligns with this motivational purpose, as its business is explicitly concerned with connecting individuals in social ways. At Threadless, though, a site primarily concerned with a form of “social shopping” (Duffy, 2009), there is still an emphasis on socializing among members of the community, mostly through Threadless’ very active general message board. In my study of Threadless (Brabham, in press), for example, social connections between members were one of five primary motivators for participation on the site. Next Stop Design, however, was strictly business, so to speak. A central forum for participants did not exist, and discussion was decentralized, confined to the comment space attached to each design submission. Additionally, Next Stop Design did not offer users the opportunity to craft
robust profiles; participants merely had a user name to identify themselves on the site. And as a short-run project-specific competition site, participants likely did not see Next Stop Design as a place to build and sustain social connections long-term. Lastly, participants did not refer to the site as a place to pass the time when bored. Relatively few individuals participated heavily on the site, and it is unlikely that one thought to visit the site regularly to pass the time. Facebook use, for instance, is more likely to be a cure for boredom, since it acts as a kind of aggregator of social news and gossip and because it allows friends to keep in touch with one another. Because Next Stop Design had a singular purpose—the competition—this probably made the site unappealing as a time-killer.

Motivational categories that did emerge in interviews with participants included career advancement, peer recognition, contribution to a collaborative effort, self-expression, having fun, and learning new skills and knowledge. In addition, participants repeatedly mentioned perceived low barriers to entry and appealing Web site design as reasons they were motivated to visit and participate on the site. This final, rather unexpected, theme points to the importance of good usability principles in the design of participatory media systems.

**To Advance One’s Career and To be Recognized by Peers**

It makes sense to discuss the themes of career advancement and peer recognition together, because these concepts complement one another in a practical sense. For a professional architect or designer, for instance, to enter a design competition is both a chance to build a portfolio of experience for future employment and a chance to receive
peer review and recognition of design work. Creative professionals see peer feedback and recognition as an integral part of career development.

Several participants explicitly mentioned the value of their participations in the contest in terms of their “portfolio,” “resume,” or “career.”

Participant C: but of course i saw it as a chance for career.

Participant E: Now, any competition advances you if you put some time into it. You learn bus stops. As far as me tho.. Oh its another notch on the ole resume. Of coarse if I won it would add a little more.. If I had really cranked on this one it would of been more than it was.

Participant H: I saw it as a way of building my portfolio and giving me an opportunity to design something I would not usually get the opportunity to do.

Participant Q: Advancing in my career yes
Participant Q: Because everytime I do this type of exercise , it involves with researching
Participant Q: and they add up
Participant Q: and we learn from them
Participant Q: and of course you learn from your design.

Participant A: Our office has an active participation in competitions internationally to broaden our portfolio, engage in architectural and design ideas and to foster opportunities (business and intellectual).

At least one participant saw the competition not just as a portfolio-building opportunity, but as a way to help launch himself as an entrepreneur. He also mentioned that the project was a fun opportunity and of a manageable size to tackle alone in his spare time.

Participant O: i’m wanting to start my own design firm in the next few years
Participant O: i will alwyas be looking for small projects like this
Participant O: at least until i get larger contracts
Interviewer: to build your portfolio?
Participant O: right
Participant O: quick, small scale designs are attractive for that. also they can be fun one or two day design charrettes with colleagues.
Peer recognition and was less frequently mentioned as a motivator for participants than the opportunity for career advancement, but it was still a significant theme and one that often accompanied a participant’s discussion of career.

Participant L: Ok, well, as an Architect, I always try to get recognition from other professionals.

Participant W: It is important when you are chosen by professionals but on the other hand it makes you very happy to see that the everyday user likes the result of your work.

Participant W, a practicing architect and the first place winner in the competition, noted that he received some publicity in his home country of Greece following the announcement of his win. He saw the media coverage of his success as a chance for him to be recognized publicly for his efforts.

Participant W: There was few publication in Greek magazines about the competition which included my name. In this way I could say I have been heard.

Most of the participants in this study were in the architecture field, as practicing licensed architects, intern architects seeking licensure, and architecture teachers. Non-architects participating in this study included an electrical engineer, a surveyor, graphic designers, and a computer programmer, and many of these people mentioned that they had studied architecture in college. In other words, nearly everyone interviewed for this study is in some way associated with design, architecture, or engineering. Considering the biggest spikes in traffic to the site occurred in response to major architecture competition blogs picking up news of Next Stop Design, the fact that most participants on the site were professional architects is not surprising. I discuss later in this chapter why it is important not to assume that crowds in crowdsourcing applications are “amateurs,” as they have been described in popular press articles about crowdsourcing.
To Contribute to a Collaborative Effort and To Express Oneself

Contributing to a collaborative effort and expressing oneself were perhaps the least mentioned motivational categories, but they did surface in more than one participant’s conversations. Participants saw the competition as a creative outlet, a chance to challenge themselves to improve their designs and express them on the site.

Participant C: there is a feeling inside of me.. I don’t know how can i explain but i’m gonna try to explain
Participant C: i’m an arhitect. So i’m designing something for people’s use. And if my designs get real, and if people uses that, i feel so happy. And this thought is getting me so excited.
Participant C: and the best point of this competition was that..
Participant C: i was gonna be builded.

Participant F: i watched the site for some time, as i mentioned earlier, then later i began to see folks building on other entries...so at that point i decided to submit my design which built upon something that intriqued me
Participant F: basically, i was inspired
Participant F: got my creative parts clicking.

Participant W: It was very refreshing designing something different using your imagination.

Participant D further commented that the competition was a nice “creative outlet to play with” and saw the challenge of a bus stop akin to “playing in someone else’s sandbox for a minute.”

Only a few participants mentioned that they were motivated by the opportunity to contribute to a communal effort. Participant J, however, provided the caveat that he would likely feel more connected to the project and in touch with the collaborative effort if he lived in Utah, where he could regularly enjoy the results of the competition.

Participant J: I rarely am astute to the larger public efforts that I participate in. I suppose that I would feel this way [more connected to a larger public effort] if I noticed a bus stop from the competition while passing through Utah.
Again, since most participants interviewed for this study, and presumably a majority of the individuals who participated in the competition in general, were creative professionals, it makes sense that they would be drawn to the competition because it was a creative outlet for them.

**To Have Fun and To Learn New Skills and Knowledge**

Enjoyment is a simple, powerful motivator. If an activity is fun and gratifies the need for individuals to be entertained and stimulated, then naturally, people will be motivated to explore that activity. This motivational category was the most frequently mentioned by interview participants.

Participant D: I definitely enjoyed it. Fun would be an accurate way to describe it.
Participant D: For me it was more entertainment than work. Not to mention it was fun to look at other people doing the same thing.

Participant Q: And I truly enjoyed seeing projects voted daily and change positions.

Participant S: I loved looking at others work. It’s hard sometimes to get away from your own designs and view other aspiring designers and architects.

Interestingly, participants seemed to enjoy not only submitting designs and watching their designs fare well in the competition, but they also liked voting and watching other designs gain and lose support. This means that one could have fun on the site without having to submit designs or be overly involved in voting. Indeed, one could have fun from observing the competition.

Participants also expressed that they enjoyed learning new skills and knowledge through the competition. Participant F, for instance, discovered an entirely new software package, the free 3D rendering application Google SketchUp, and he was driven by his
participation in the competition to finally develop a professional Web site for his own work.

Participant F: you did a nice job of introducing Google Sketchup
Participant F: personally, I had never heard of that software before this competition
Participant F: and what is even more fascinating to learn...
Participant F: from this competition, I created my own personal website
Participant F: which displays my personal work, never had that before.

Other participants learned about the complexities of bus stops, the importance of building materials in bus stop shelter construction, and about transit planning in general.

Participant Q: I have learned how to challenge a bus stop design
Participant Q: how to break apart a typical bus stop
Participant Q: and create something more fun out of it
Participant Q: every time I do this type of exercise, it involves with researching
Participant Q: and they add up
Participant Q: and we learn from them
Participant Q: and of course you learn from your design.

Participant S: well I was trying my best to get my mind outside of the climate I’m used too. I also was trying to think of the communication and connections that could be made at the bus stop.

Participant W: I did a further research on the materials I would use that ended up very interesting and I learned few new things about it.

Learning about the complexity of a planning issue is one of the primary goals of public participation programs for urban planning. Educating the public about an issue is, in many ways, a kind of first level for effective deliberative democratic process; without an informed public, productive dialogue cannot go forward. It is heartening to see that participants learned a significant amount of new knowledge and that they enjoyed participating and learning. This is promising for future online public projects with similar goals. Though some participants seemed unaware of the project brief or did not see the brief as integral to their knowledge of the project, participants did seem to learn a lot
from actually involving themselves in the competition. Thus, a kind of experiential learning or “learning by doing” (Dewey, 1938) was in effect in the Next Stop Design project.

Low Barriers to Entry, Ease of Use, and Perceptions of an Appealing, Usable Web Site

Beyond the nine broad motivational categories discussed in Chapter 2, an additional theme emerged through interviews with participants. This theme related to a perceived low barrier to entry in the competition, and perceptions of an easy to use, appealing Web site. Participants first visiting the site were enticed by the “Web 2.0” look and feel of the site, as well as by the fact that competition was free to enter and covered the limited scope of a bus stop shelter. Architects are familiar with the concept of design competitions, often decided by a jury, and these competitions more often than not require fees to enter. Fees can range from a few hundred to a few thousand dollars, a cost that is prohibitive for many architecture students, sole proprietors, and amateur designers.

Participant D: [The competition presented] A “simple” problem with a “simple” program. As a sole-proprietor, I don’t have a lot of time to spend on competitions. So the scale of the project, the price of entry, all was in my time/budget.

Participant D: Hand sketch a few ideas, scan, upload and done.

Participant E: cost here is a big issue. When I see a competition that is low cost/free then I tend to consider it on a fun level and “hell why not” level.

Participant H: It was simple and easy, and free to enter

Participant O: I thought the project was an interesting opportunity. Free entry is great as it allows young start ups and students to get involved.

Participant O: the free registration probably led to me registering.

Participant R: Free competition was a good step really .. the fear that free comp brings in inserious, trivial results is false.
Participant F echoed other participants by noting the scope of the project was manageable. Bus stop shelters are complex enough to be challenging for designers, yet they are familiar and contained. Designing a bus stop shelter is not nearly the same as designing an entire transit system. Smaller design projects can help novice designers develop a perspective and refine skills, and free entry allows this development to occur without the burden of high cost.

Participant F: was a small project..that also excites folks
Participant F: like a confidence builder

The Web site’s design and visual appeal was key in motivating participation as well. The pace of social media development draws many individuals into exploring many new interfaces and tools in a short span of time. Individuals are bombarded with an array of options for engaging with social networks and uploading user-generated content. Because of the abundance of options, it is reasonable to assume that individuals spend very little time exploring new Web sites and decide whether or not to engage in new sites based on quick judgments about the visual appeal, organization, navigation, and general usability of a Web site interface. Participants soundly praised the design of the site in this regard.

Participant B: I thought the website well put together, easy to follow the process for submitting ideas, easy to find the criteria and considerations for the design, and so on. Visually very appealing: clean, straightforward pages and well-labeled tabs.
Participant B: I seem to recall the visuals were very clever and appealing.
Participant B: Drew one into the project nicely.

Participant E: The layout is quite clean. Windows 7 like.

Participant O: I think the website was clear, easy to use and intuitive. Which is fantastic. there are tons of terrible websites out there.

Participant R: the web site was pleasently lucid, handy, easy.
Participant W also noted that the speed and ease of browsing through designs motivated him to participate on the site.

Participant W: You had a really fast competition site, the one I told you about in the greek competition became really slow because of the participants and you need ages to see all the projects

Participant W: It is very important to be able to browse fast.

Future publicly funded projects that seek user-generated content or online public participation need to focus on the importance of usability. If a Web site presents any kind of excessive burden on participants in the first few seconds of use, the participant may give up and exit the site. Sites that have appealing colors, clearly labeled buttons and tabs, seem easy to navigate, and communicate the purpose of the site and user expectations for participation clearly are the sites that motivate individuals to engage. The importance of usability is fairly widely known in Web design circles, but administrators and facilitators may not be aware of just how important of a motivator a well-designed, usable site may be for a project.

General Impressions and Crowdsourcing for Future Government Projects

In these interviews, I also solicited general commentary from participants regarding the project and its potential to be translated for other public purposes. Responses here were mixed. Most of the praise focused on the openness and democratic feel of a publicly voted design competition, and much of the criticism stemmed from the assumption that everyday citizens could ever really be as effective in providing and selection designs as a professional architect, designer, or engineer. Once again, too, the criticism was framed in a constructive way to make the process better.
Participant H: I like the concept, however I think it is a very very poor way to choose a good design. I think a format that included public voting for say... 75% of the overall votes could have been a better format. Leaving it all up to the public, the general public, and not the company using it and/ or the local people is not the bst strategy.

Participant H: In general, the local users know more about the needs and uses, rather than the general public of the entire world. IN addition, the company owning/operation the stations (even if it is the Government) shoudl have a say in what they are using. But like I said, I think continuing to use a large percentage of the general publics vote is a good idea.

Participant W: I think it was a well organised project and I found very interesting people could involve in the city design.

Participant O: i think in general it was/is a good exploration of community involvement with design.

Participant O: i think there is so much criticism of our build environement and architects and designers because people don't understand the process or feel like they has a say in what is actually built.

Participant O: too often it feels like a bunch of rich people and politicians make all of the choices and force them on teh public.

Participant O: i think initiatives like this are a great way to break down some of those perceptions.

Participant O: and hopefully it inspires some 12 year old to pursue architecture as a career.

Other general comments focused on the need for a project like this to involve juries of experts for at least part of the overall decision in a competition. There was considerable doubt among these interview participants—most of them professional architects—about whether a public vote would be adequate for judging the quality of a design. Many participants thought a jury would be necessary to check, supplement, or override the public’s decision.

Participant M: I’m a proponent of getting the public involved in the design process, although I think a panel of authoritative judges should make the final call based on the top public-chosen designs. That being said, I think this could work for any non-confidential government projects.
Participant I: I’m often involved in state and city projects related to infrastructure and planning. Most of the work involves community participation - both large and small scale. In either case, this process could be used to help make decisions as long as the technology is accessible to all - this is not always the case in small towns, etc.

Participant L: like competitions or events where the public can give their opinions, however, I don’t think it should be the final decision... I don’t recall if the competition had a formal Jury...

Based on the conversations with these participants, crowdsourcing may be a useful tool for other online public participation ventures. The question for whether this kind of method is appropriate really stems from the concerns individuals have about the value of amateurs in competitions that seek to replicate or supplant professional services, such as architectural services. Because bus riders are end-users of a transit system, they are good judges regarding the usefulness of a proposed bus stop design. A competition like Next Stop Design for these individuals seems a democratic outreach project worthy of attention. For architects, though, the concern may be whether these end-users truly possess enough professional knowledge of architecture and design to make a public voting contest like Next Stop Design worthwhile. In the end, more people ride buses than design buildings, so the more public a voting process for a public good like a bus stop shelter, the better. Still, this brings into question the notion of the amateur and the role he or she should have in the design of public spaces.

Amateurs, in the scope of the Next Stop Design competition, would be those who are bus riders but who do not have licenses to practice architecture or years of schooling in design. The rhetoric surrounding crowdsourcing has included the use of the word “amateur” to describe the average individual in the crowd. Jeff Howe’s own blog, *Crowdsourcing: Tracking the Rise of the Amateur*, was launched at the time of his
article’s debut and emphasized the role amateurs and hobbyists played in the crowdsourcing landscape. On the contrary, though, Lakhani et al. (2007) found that nearly 70% of the solver community at crowdsourcing site InnoCentive held Ph.D.s, and I found that the majority of interviewees who participated at crowdsourcing sites Threadless (Brabham, in press) and iStockphoto (Brabham, 2008) had considerable training in creative disciplines and many worked as creative professionals. In other words, the notion of the amateur driving crowdsourcing endeavors is faulty. Many of the people who choose to participate in crowdsourcing ventures are professionals, or at least have formal schooling in the discipline being tapped for a given competition. Howe painted the picture early on (2006a, 2008) that everyday Americans in cubicles toiled away at crowdsourcing sites to generate value for crowdsourcing organizations. In reality, the majority of people who participate in these processes do this kind of thing for a living. Individuals in the crowd are self-selected for the task at hand. Architects are drawn to architecture competitions at sites like Next Stop Design, scientists are drawn to scientific challenges at InnoCentive, and graphic designers are drawn to Threadless competitions. Crowds are not comprised of amateurs. This has some bearing on the role of these kinds of competitions in other government projects whether online public participation is the goal. Public participation assumes a general public, comprised in large part of amateurs in a very pure sense. Crowdsourcing competitions attract professionals and those with a special interest in the task at hand. By their very nature, crowdsourcing competitions may not be ideal for reaching vast, diverse audiences. Still, though, the openness of the crowdsourcing format allows anyone to participate on an equal footing with others in the competition.
In sum, interviews with participants from the Next Stop Design competition revealed much in the way of online deliberative democracy and motivations. In regards to online deliberative democracy, participants positively appraised the Next Stop Design project according to most of the ideal features for online deliberative democracy identified by Noveck (2003). The deliberative democratic shortcomings for this project included primarily the facilitation mechanism for the site, the voting process, which in many participants’ eyes seemed to favor some groups over others and made the integrity of the contest as a whole suspect.

Regarding motivations, participants were largely driven to participate by the opportunity to advance their career, to have fun, and to learn new skills and knowledge. A recurring theme relating to motivation, and a theme that falls outside of the nine general motivational categories I identified in Chapter 2, was that of usability and a low perceived barrier to entry. Several participants mentioned that the project Web site seemed at first to be visually attractive, easy to use, and at no cost to participate. This theme further emphasizes Noveck’s (2003) ideal of accessibility for online deliberative democratic processes, and it emphasizes the importance of Web usability and design in participatory “Web 2.0” interfaces. Other projects ought to pay special attention to Web usability and design, as these factors can make or break an online participation project, so to speak.

Ultimately, the study partially supports crowdsourcing as an effective online deliberative democratic tool, and participants saw some value in the project as a whole and would welcome future iterations. The study also asserts Noveck’s (2003) list of ideals as an effective heuristic for designing and assessing exploratory projects in online
public participation. This study also confirms the relevance of uses and gratifications theory in the study of new media technologies and supports some of the existing descriptive motivational types previously seen across several studies with various media. Participants did express concern about the value of amateur input in competitions involving professional skill sets, but I point out that competitions like these may be less amateur than most people assume in the first place and may actually be quite effective ways to aggregate professional opinion on an issue. Finally, this study identifies usability and low barriers to entry as important motivators for Web sites like Next Stop Design that require a considerable amount of interactivity, creative energy, and participation from users. Uses and gratifications theory rightfully ought to be concerned not only with what individuals use media for, but also—and especially in today’s new media landscape—whether individuals perceive media as able to be used easily in the first place. That is, these data suggest that in designing online deliberative democratic spaces, we ought to focus first on if it is usable before focusing on how and why people use it.
CHAPTER 5

CONCLUSION

More than 20 years have passed since the launch of the Public Electronic Network (PEN) in Santa Monica, California. Offering a way for government to disseminate information to citizens electronically and offering what became a vibrant place for dialogue between citizens and government officials, PEN set the precedent for dozens of e-government and e-democracy initiatives that would take place across the U.S. and the rest of the world in the subsequent years. Davies and Gangadharan’s (2009) book charts some of the developments in e-governance, from information dissemination to filing forms online to direct democratic voting. However, we have only just begun in recent years to see concerted collaborations between citizens and administrations. So few e-government initiatives in these past decades have worked to unite the governing and governed in productive, creative activity. Examples include Peer-to-Patent (Noveck, 2006) and the New Zealand Police Review Act project where citizens refined public policy in collaboration with the government through the use of a wiki (Lips & Rapson, 2010). Humbly, I add Next Stop Design to this evolution in e-governance. Like PEN, Next Stop Design was conceived as a space for citizens to engage in a public process to design a better public space. Unlike PEN, though, Next Stop Design tested the architecture of crowdsourcing as a facilitation mechanism for a deliberative democratic process. A common spirit runs through most e-government projects, from PEN to Next
Stop Design, but the tools used to manifest this spirit have rapidly evolved. As technology improves, scholars and public servants can continue to refine processes to use these tools to maximize citizen genius, all in a critical media design approach.

The Next Stop Design project provided an opportunity to observe a crowdsourcing application from start to finish, to see how an online community forms in response to a broad challenge, and ultimately, to discover how crowdsourcing may function as an online public participation tool for other projects. Interviews with Next Stop Design participants generated a wealth of rich, qualitative data pertaining to the effectiveness of the tool in creating an online deliberative democratic space, as well as the motivations of the participants. In this concluding chapter, I first summarize these key findings. Next, I discuss the limitations of this study, offering a moment of reflection that is crucial for any qualitative research endeavor, and identify future needed research in this area. Finally, true to the critical media design thrust of this project and with hopes that practitioners may adopt crowdsourcing as a tool for participation in public affairs, I offer a series of guiding principles about crowdsourcing. These principles are based on lessons learned from Next Stop Design and case study literature from other crowdsourcing exemplars, and it is my hope that these principles provide the beginnings for a toolkit of sorts that practitioners can flexibly use to solve many other public problems with the help of new media.

**Summary of Findings from this Study**

Participants interviewed for the study generally held positive opinions of Next Stop Design in terms of it being an effective public participation tool, though there are many moments where participants were critical of certain aspects in the competition. In
these moments of criticism, however, participants by and large offered constructive feedback, and sometimes technical solutions outright, for improving the process. I consider this willingness to improve the process and the tool itself to be a key finding in this study, as it suggests that participation in the refinement of the project at a meta-level occurred alongside participation in the design of a bus stop specifically. In terms of motivation, participants saw their participation at Next Stop Design as motivated by the opportunity for career advancement, peer recognition, contribution to a collaborative effort, self-expression, having fun, and learning new skills and knowledge. Most participants also mentioned that they were motivated to participate because they perceived a low barrier to entry to the competition and found the Web site itself visually appealing and usable. Well designed, usable Web sites, which includes Web sites that have low barriers to entry, have long been a goal of government agencies and corporations alike. However, that this topic emerged in conversations with many participants as a distinct motivator for participation reinforces the importance of good design for online participation tools.

Findings Related to the Ideal Features of Online Deliberative Democracy

Participants felt Next Stop Design aligned with many of Noveck’s (2003) ideals for online deliberative democracy, but some participants found the ideals of facilitation, equality and responsiveness, and accountability and relevance of peers on the site to be lacking. Concerns about the voting process on the site and the evidence of cheating by some individuals made participants wary about the site’s facilitation and the equality among participants. Though the Next Stop Design team took steps to remove fraudulent
users and votes from the competition, and though the team posted an explanation about this removal process on the site, participants did not seem to notice this. Furthermore, some participants expressed doubt about the ability for everyday users to effectively assess designs, thinking that some combination of a jury and an open vote was more appropriate. And many participants expressed concern about the popularity contest aspects of the competition, where individuals could easily bring groups of friends to the site to vote on a particular design. These participants felt this made the competition fundamentally unequal, though some participants thought this occurrence was still fundamentally democratic in theory.

Anonymity on the site was also a concern, as it lessened the accountability and relevance of others on the site in the opinion of interview participants. Users did not have profiles, their voting records were not visible, and no common discussion space existed for everyone on the site. Thus, some users flamed others in the competition through comments on certain designs. The anonymous cover provided for users on the site also likely contributed to attempts to game the votes.

Still, many of the ideal features were evident in the Next Stop Design project, according to participants. Participants found the project inclusive, pluralistic, accessible, informed, free of censorship, autonomous, and at least somewhat public and transparent. Minor criticisms pertaining to these ideals from small numbers of participants did occur, but along these lines, participants offered astute feedback. Participants offered general ideas as part of their feedback, as well as detailed steps and technical suggestions for improving future iterations of the project. The quality of the feedback offered by participants suggests that participants perhaps unknowingly participated in the refinement
of this new media tool alongside their activity in the bus stop design competition. Next Stop Design, then, not only suggests that crowdsourcing can be viable for design competitions, but it may also be a way to continually refine the public participation process online. In the same way Threadless incorporates its online brand community in the improvement of the company as a whole, all while using the community to design the products it sells, Next Stop Design brought participants into the improvement of the tool alongside the design of bus stops.

**Findings Related to Motivations**

Participation in a design competition, especially for a creative professional, is an opportunity to develop one’s skills, earn peer recognition, and build a portfolio for career advancement. Next Stop Design participants indicated that these were strong motivators for their participation on the site. Perhaps it is no surprise, then, that the majority of participants interviewed for this study were creative professionals, mostly architects. I discuss in Chapter 4 that the notion of the amateur driving crowdsourcing applications is faulty. Crowdsourcing applications, such as Next Stop Design, attract individuals with a special interest in the challenge at hand, and often these individuals are trained professionals with skills, reputations, and careers to build through their participation.

Amateur or professional, though, if participation in an online project is not sufficiently enjoyable or fulfilling, why would anyone participate? Participants consistently reported that their experience on the site, both in design submission and voting, was fun, an outlet for self-expression, and an opportunity to contribute to a collaborative activity. Given so many other opportunities for individuals to participate in various Web 2.0 sites, to play online multiplayer games, and to explore the many creative
outlets that exist in the whole of the Internet, Next Stop Design had to simply be fun enough to attract the level of participation that it did. Future crowdsourcing projects must seek to be fun as well.

Finally, interviews with participants underscored the importance of good usability and design for all Web sites, but especially publicly funded sites in the public interest. Indeed, participants were actually motivated to participate based on the visual appeal of the site, the ease of navigation, and the fact that registering for the site and entering the competition posed little burden on their time and energy. Government Web sites such as the U.S.’s www.usability.gov and other commercial resources offer a number of suggestions for designing usable, attractive interfaces, and sites such as www.section508.gov provide guidelines to make sure Web sites are designed to be maximally accessible to individuals with varying physical abilities. These principles, which were consciously employed in the design of the Next Stop Design site, seemed to pay off, drawing in a large amount of users and traffic to the project.

Limitations and Future Needed Research

Next Stop Design, like any research site, was a rich source of data and opportunity for study. The Web site was not set up to be a social scientific experiment with controls and variables that could be studied one at a time. Rather, Next Stop Design was first and foremost designed to actually work in a real, organic sense. The team was focused more on executing the project successfully than on capturing neat, controlled data sets to test variables. Indeed, this was what the funding organization, the Federal Transit Administration, wanted from the project as well. Thus, Next Stop Design became more of a case study than an experiment, more a living organism than an apparatus. It
was, then, an imperfect thing that created imperfect opportunities for gathering data. Limitations in the study can be divided into two categories: issues concerning the research site itself (the Next Stop Design case) and issues concerning the design of the study.

Next Stop Design launched June 5, 2009, in the middle of a barrage of press releases and social media efforts. The team wanted to drive users to the site quickly and in large numbers to bootstrap the online community early on. Paid advertising was really the only way to guarantee that certain media outlets would carry news of the competition, and the team did not pursue paid advertising. Even then, advertising is only so effective at attracting attention. Public relations and social media efforts, though, are unpredictable. The team anticipated that Utah media outlets and local blogs would carry news of the competition, but no Utah media picked up the story until just a few days before the competition ended in September 2009. Meanwhile, blogs with international followings; German Web sites; Washington, D.C., radio stations; and many other kinds of media outlets latched on to the story. Thus, news of the site was disseminated rather unevenly and scarcely at all in Utah, and traffic to the site was similarly varied. This made for a database of registered users that unevenly represented the world. Likewise, that Next Stop Design existed online only automatically limited the participation of those around the world with little or no Internet connectivity or skill.

As mentioned in the findings from this study, many participants found the architecture of the site problematic in that it allowed users to remain anonymous, did not offer a communal discussion space, and made gaming the votes relatively simple. These conscious design decisions in the creation of the project Web site surely affected the kind
of responses that emerged in interviews with participants. Future studies centered around a crowdsourcing application should consider these factors in the initial stages and teams should design sites accordingly.

There also emerged a kind of amateur-professional tension in the course of the competition. Early designs submitted to the site were napkin sketches, clearly amateur efforts to design a bus stop shelter. Eventually, though, a 3D rendered bus stop design was posted to the site, and all subsequent designs submitted to the competition were of this caliber. It is likely that those without as much artistic talent who submitted the first designs were intimidated by the arrival of fancy 3D illustrations and chose not to participate further in terms of design submissions. The online space of the competition became dominated by professional-looking designs and amateurish sketches seemed out of place after that point. The nature of a competition site like Next Stop Design is that it can become hijacked, in a sense, by the presence of experts, and nonexperts may refrain from entering because they do not see their work as standing a real chance in a sea of expert designs. Because this tipping point between amateur and professional quality occurred early in the competition timeline, many more architects and other creative professionals likely participated on the site overall than nonexperts. This made for a skewed collection of professionals in the registered user database. This is not necessarily problematic or surprising, as I have noted elsewhere in this dissertation, but it does affect the ability of a researcher to get a more diverse sample of the “public” in such a “public participation” endeavor as this was intended to be.

Another tension of sorts arose during the competition, and that tension concerned the influx of an international user base in response to a challenge to improve a Salt Lake
City bus stop. Though participants interviewed for this study did not point to the international involvement on the site as problematic, and in fact some pointed to this geographic diversity as a strength, it is fascinating that such international interest would emerge for such a local problem. To set out on a research study concerning public participation for a local issue and to encounter a mass of international participants engaged in the project is a limitation. This study was designed to capture a very American sense of public participation in a very American tradition of representative democracy and citizen engagement. The site, first of all, was entirely in English. Also, the registration process asked a question about race and ethnicity, though the categories were distinctly American conceptions of the (artificial) construction of race, per U.S. Census standards. In many ways, actually, the project was always intended to be an American endeavor. The global reach of the Internet, however, blurred the lines of geography quickly. This meant, though, that the Web site was misaligned with a large percentage of the users, and this may have skewed which visitors might have decided to register on the site and which ones might have been turned off to the project. It is difficult to tell. Through the lens of Noveck’s (2003) 11 ideal features of online deliberative democracy, this global-local tension seems on one hand to be a testament to Next Stop Design’s strengths in terms of being pluralistic, inclusive, accessible, and public, but on the other hand, conflicts with the presupposition that deliberative democratic processes and public participation programs are fundamentally local in scope. Future studies ought to assume a global audience and should craft a competition, registration process, and site management policies to be internationally inclusive, even if the scope of the project is intended to be local. Future research might also focus on the perceptions of international
involvement in a local public participation process such as bus stop design. Perhaps some users may see users from other nations as unwelcome outsiders meddling in the business of a local community. In the end, if the right data are captured from participants during registration, results can be filtered by geographic location, thus producing both products of international involvement and products filtered only from locals.

A second category of limitations concerned the design of the study itself. As discussed in Chapter 3, online interviewing with instant messenger (IM) has its own set of limitations. These limitations include a constrained amount of affective response, the likelihood that the interview subject may be distracted or multitasking during an interview, and the uncertainty that one is really chatting with the right person. Language barriers could also be added to this list of limitations concerning IM interviewing. In a few cases, some meaning may have been lost in translation, as interview subjects whose first language is not English seemed to struggle with English grammar or my colloquialisms. And the interview conducted in Spanish with Babelfish translation software was not even admissible in this study, indicating a need for future research efforts to consciously adopt multiple language capabilities to reach these participants willing to engage in the study. A final downside to IM interviewing is that it was difficult to execute actual interviews with some participants. A few participants signed up for certain times to be interviewed and provided their IM screen names. However, over the course of several weeks, I never saw some individuals ever sign in to their IM accounts, let alone at their scheduled times. Not everyone is comfortable with IM, and those who are may not spend much time logged in. Thus, a limitation for research is that a self-selected group of participants quite familiar with IM tend to be the ones eventually
interviewed. This also probably means they are more computer savvy than most and may also have more time in front of a computer at their disposal. Future studies should take care to offer participants many interview options, including telephone and e-mail interviewing.

Lastly, I believe the quality of the study was limited in part by the timing of the interviews in relation to the competition timeline. The competition closed September 25, 2009, but I did not begin interviews until March 2010. I analyzed the basic traffic and registered user data from the competition after it ended in late September, and I used this analysis to inform my research questions and develop a quota sampling strategy. This delay of several months meant that some participants may have forgotten exactly what their opinions of the project were. A few participants asked for me to provide a link to the archived competition site to refresh their memory, even. This delay also meant that some participants who were contacted for an interview may have declined because too much time had passed since the competition. This probably also means that some of the least involved participants in the competition—those who at most cast one or two votes and did not submit designs—may have felt extremely distant from the competition and irrelevant for my study. This may partially explain why my interview participants skewed in the direction of being more active on the site than most registered users. Future studies should take care to engage participants in follow-up interviews shortly after the close of a competition, meaning that more researchers may need to be available to analyze basic findings and cultivate samples in these narrow time frames.
Guiding Principles for Practitioners Interested in Crowdsourcing for Public Participation

I conclude this chapter and this entire dissertation with a list of guiding principles for practitioners who may attempt crowdsourcing as a means to improve public participation. I believe strongly that communication research ought to be accessible to nonscholars and should extend to application where possible. Next Stop Design was an effort in critical media design, and the outcomes from this study have implications for practice. Drawing from this study and lessons learned from other crowdsourcing cases, I offer practitioners the following principles for crafting an effective crowdsourcing application for public participation. The source code for the Next Stop Design Web site, produced with Ruby on Rails, an open source product, is publicly available at http://github.com/nextstopdesign/nextstopdesign-1.0.

Clearly define your problem and the solutions you seek. A crowd that does not know what it is supposed to respond to will either not respond or will respond in a variety of ways. Explain to users that there is a specific problem in a specific context, and constrain solution submissions so that they address the problem at hand. Asking for general commentary generates general commentary, but asking for users to actually do something specific will result in specific tasks getting done. Constraining solutions can be done through policy or through architecture, by designing the site to only allow files of a certain kind or size or designed within a given template. Constraints are required for the design process, and parameters for feedback and discussion ensure that a deliberation progresses in a clear direction rather than flounders about.

Determine your level of commitment to the outcomes. Organizations must be willing to accept what the crowd produces to some extent. If you launch a crowdsourcing
application but make it clear that your organization is not willing to adopt any of the
crowd’s ideas, then why would a crowd take your organization seriously in return?
Organizations do not necessarily have to guarantee that they will incorporate all of the
ideas generated during the process, but they do have to commit to incorporating some
ideas, and this level of commitment needs to be clearly stated on the Web site. Crowds
need to know how serious you are about their creative energies before they invest time
and talent in your organization. Consider whether you will take the ideas from the crowd
in an advisory capacity for your organization’s goals or whether the crowd’s ideas will
directly become policy or be implemented for the organization, or whether you are
comfortable with something in between. Communicate this commitment to the crowd.

**Understand what motivates users.** Crowds are motivated for a variety of
reasons. Some are drawn to projects as an opportunity to make money, some see the
activity as enjoyable, some want to make friends and professional connections through
the project, and some want to challenge themselves and learn new skills. Understand the
many ways a crowd may be motivated to engage your crowdsourcing project and find
ways for individuals to realize these gratifications on your Web site. When bounties are
appropriate, do your research. Find out what amount of money, if any, makes sense to an
individual in the crowd and commit to paying it out. Design a crowdsourcing application
with the user in mind, not the organization. Think about what motivates an individual to
want to participate in adding value to your organization, rather than think about ways you
can manipulate an individual to bring value to your organization. Do not insult a crowd
by crafting a crowdsourcing application as a thinly disguised marketing opportunity or an
opportunity to leverage the crowd for free labor. This will not work and it may draw backlash that could hurt your organization in the long run.

**Invest in a Web site that is usable, interesting, and designed well.** Do not skimp on the technology. A professional Web designer, graphic designer, information architect, and usability professional are all essential to creating excellent interfaces. These services do not come cheap and a good Web site requires much time, patience, and testing. An attractive, usable Web site makes the first impression on a potential user, and a cluttered, ineffective site may deter traffic and cause your community to collapse.

**Have a promotional plan and a plan for growing the community.** Perhaps the most crucial step—and the biggest unknown—in the development of a crowdsourcing application involves the building of the online community, the crowd. Without the crowd, the project cannot be sustained. Communities form at first from word-of-mouth and media exposure. Craft a coherent public relations, advertising, and social media plan and launch these efforts in a blitz just prior to the launch of the site. If an online community is slow to get started, it will appear as a ghost town to a new visitor, and the visitor may turn away. Consider seeding a site with dummy data, designs, and users to give the impression that the site is live and active. This draws users in. Eventually, hopefully, individuals in the community will bring new members in, and buzz about the project will be picked up in bigger and bigger venues. Opinion-leading blogs and social media sites like Twitter and Facebook are perhaps more important than traditional media coverage, so target your efforts in this direction.

**Be honest, transparent, and responsive.** Crowds are powerful, and they can turn on you if they are mistreated. Do not meddle in the affairs of individuals on the site
without being completely transparent in the process. In other words, if you catch someone cheating or writing abusive comments on others’ designs, and you take action to remove them from the competition, you owe the community as a whole an explanation for what you did and why. Better still, empower individuals on the site with tools for self-governance. Consider reputational ranking systems, community-appointed moderators, and other mechanisms to make it so you do not have to get involved much in the first place. But if you do get involved, do so fairly, be responsive to the needs of the community, respect the dynamics of the online community, and be transparent in your actions. To be effective in this way, plan on investing considerable time observing and engaging in the daily activity of the site.

**Let go of control.** Crowdsourcing applications that seek to control the behavior of the crowd too much will fail. Likewise, organizations that are fearful of turning some control over to the crowd face the possibility of backlash or failure. Trust that the crowd can police itself, that individuals in the crowd have great ideas, and that with the right tools, these ideas will rise to the top. You are not using the crowd to accomplish your organizational goals; you are allowing the crowd to become involved in the business of your organization by turning over some of the reigns to them.

**Acknowledge users and follow through on obligations.** Naturally, if you have committed to awarding the winner of a crowdsourcing application a prize, you should follow through with the award. Acknowledge all users for their time and effort. Consider recognition programs, and consider ways to allow users on the site to acknowledge each other. Be appreciative of the creative energy crowds invest in your organization and make good on obligations you made to them early on.
Assess the project from many angles. Crowds can provide some of the best feedback on your project and can help refine your tool for future uses. Ask them for feedback, respect their insights, and find ways to incorporate their ideas for future projects. Crowdsourcing applications generate a wealth of data, as well. Winning ideas contribute a lot to understanding how and why individuals think the way they do about a certain issue, but losing ideas can reveal just as much. Analyze all scraps of data you can from what users generate on your site, analyze traffic data, and contact users for follow-up interviews.
APPENDIX

INTERVIEW GUIDE

Questions to operationalize concepts related to RQ1 (Noveck’s [2003] 11 ideal features)

- Did you think the Next Stop Design project was effective in general? Why or why not? How so?
  
  o **Accessible** – Was the site easy to use, access, understand?
  
  o **Free of censorship** – Did you feel that you were able to freely express yourself on the site?
  
  o **Autonomous** – Did you feel that you were an active participant in the business of the site?
  
  o **Accountable and relevant** – Did you feel anonymous on the site or exposed? Did you feel others were anonymous or exposed?
  
  o **Transparent** – Did you understand the rules of the competition, what agency benefitted from the competition, and how the voting worked?
  
  o **Equal and responsive** – Were participants equal on the site? Have the same influence?
  
  o **Pluralistic** – Was there a wide range of ideas presented on the site? Significant amount of diversity of opinion?
  
  o **Inclusive** – Did you feel there was a diverse variety of users participating in the project?
  
  o **Informed** – Was there enough information available on the site to understand the competition? Did you learn anything by participating?
  
  o **Public** – Did you feel as though the project was to benefit the public, a specific community, or a specific individual? Do you think other participants understood this as well?
Facilitated – Did you think the voting system was an effective way to present and sort through people’s contributions? Was it fair?

Do you think a Web site like this would be useful for other government functions? Why or why not? What functions?

Questions to operationalize concepts related to RQ2 (nine broad motivational categories)

• How did you hear about Next Stop Design?

• Why did you choose to participate on the site?

  o To make money – How did you perceive the competition might benefit you financially?

  o To advance one’s career – How exactly did you see your involvement on the site as benefitting your career? Did you want to add your bus stop design to your portfolio of creative work? Did you hope to learn new marketable skills?

  o To be recognized by peers – How did you feel during the competition? Was it important to be rated highly or win, did you value the comments you received, did you want to have your work seek by others?

  o To meet new people and socialize – Did you make friends through the site? How did you meet? What people on the site did you enjoy meeting? Did you feel like you were part of a community?

  o To contribute to a collaborative effort – Did you feel like participating on the site was an important activity for you as a citizen? Did you feel part of something big and communal? Do you think this project is a good way to work together with others or to have your contributions count?

  o To have fun – What aspects of the site did you enjoy the most? Why? What aspects did you enjoy the least?

  o To pass the time when bored – Why was the site a nice diversion? What specifically did you do on the site to pass the time? How often did you use the site in this way?

  o To learn new skills and knowledge – What did you learn from participating on the site? What can you now do better because of your involvement in the project? Do you know more about bus stops or transit planning or the Internet now that you have experienced the site?
To express oneself – Was Next Stop Design a useful outlet for your creative talent? For your analytical expertise? Why did you feel compelled to express yourself through this site in particular?

- Would you participate in a competition like this again? Why or why not?
REFERENCES


