RESEARCH ARTICLE

Community in the information age: Exploring the social potential of web-based technologies in landscape architecture and community design

Deni Ruggeri[a], Deven Young[b],*

[a]Department of Landscape Architecture and Spatial Planning, Norwegian University of Life Sciences, Aas, N-1432, Norway
[b]Landscape Architecture, Alta Planning and Design, Portland, OR 97202, United States

Abstract
Critics have pointed at new technologies as culprits in the decline of civic life, neighboring and social capital construction in Western societies. When applied to community design and planning processes, technologies can empower residents to actively engage in decision-making, foster connections across social groups, with positive consequences on life and socialization in public spaces. What kind of participation do technologies foster? And is it the kind that bridges social and ideological divides?
The 2012 community design process for Hawthorne Park in Medford, Oregon illustrates many of the challenges and opportunities connected to the use of new technologies in design. In the process, technologies were instrumental in enlisting a larger-than-usual number of residents to participate in the design of the park. Blogs and online questionnaires were successful in gathering people's thoughts on the design choices being made, but also favored a limited, intermittent form of engagement. The results are synthesized in principles for the successful integration of web-based technologies in future community design efforts: adaptability, full participation, nuanced participation and the need for links to the physical realm.
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*Corresponding author. Mobile: +1 5035752768.
  E-mail addresses: devenyoung@altaplanning.com,
deven.young@gmail.com (D. Young).

1. Introduction

This study explores the potential of integrating web-based technologies into community design processes. Community design, which used to be at the margins of the environmental design profession, has been institutionalized and mandated by law in ecologically and socially sensitive projects. Engaging communities in redeveloping and preserving culturally or ecologically significant landscapes has been recognized internationally (Déjeant-Pons, 2006).

The Internet has changed the way people live, work, and socialize; thus, it has prompted new research on the effects of information and communication technologies on the civic life and social responsibilities of individuals (Hudson-Smith et al., 2005; Castells, 1996). Through thick description (Geertz, 1973), this case study sheds light on the possibilities and pitfalls connected with the integration of web-based technologies in participatory decision-making and social capital construction processes.

In 2012, an Internet-based digital platform created by the author, i.e., the Community Design Project (CDP), was used to engage residents in redesigning Hawthorne Park in Medford, Oregon. The platform tested the perceptions of goals established by the local council and gathered the visions of residents for a new park. CDP helped the design team gather citizen feedback on park design options and provided insight into the quality of citizen engagement and social capital construction. A total of 1553 Medford residents participated in the design process through the CDP interface. Although the turnout was considerably higher than those registered by face-to-face charrettes, the success of CDP raised issues on the quality, depth, and motivation of the participants.

2. Background

2.1. Civic engagement in the Internet age

While traveling around the United States in the 1830s, Frenchman Alexis de Tocqueville observed the commitment of the American society to democracy and solidarity. By working together, American citizens realized goals that would have otherwise been impossible for individuals to achieve (De Tocqueville, 2003); this practice eventually contributed to the identity of the country as a beacon of democracy. At present, the participation of Americans in civic life is at its historic low. The United States ranks 120th out of 169 countries in vote-to-registration ratio (Pintor and Gratschew, 2002). For example, in the state of Oregon, voter turnout dropped by 20% between 2000 and 2010 (Oregon Secretary of State, 2014).

This disinvestment in civic life has eroded the trust of the people in public good, and only one out of 10 Americans has regular contact with a public official or a government agency (Kanter and Schneider, 2013). Commentators and researchers have blamed the declining civic engagement on the educational system, which has eliminated civics from its curriculum, and thus, has left younger generations without a means to learn about and practice democracy (Gencarella-Olbrys, 2004; Ruggeri, 2014).

2.2. Community design practice

In the United States, landscape architects Randolph Hester Jr. and Mark Francis, architect Sam Mockbee, and community planner Henry Sanoff were among the first to react against top-down modernist planning by engaging communities in decision-making. Through bottom-up processes and public workshops, they gave voice to underserved citizens and preserved daily landscapes against wholesale urban renewal plans (Hester, 1999; Loukaitou-Sideris, 2000). Only during the rise of the environmental movement in the 1970s was public participation mandated by law to resolve contentions and build consensus around ecologically sensitive projects. The institutionalization of community engagement has motivated several design firms to specialize in community design processes.

Community-based processes have become alternatives to traditional politics, particularly in communities where the aging or shrinking population makes traditional governance difficult to implement (Kot and Ruggeri, 2005). Landscape architects are leading projects that are shifting public discourse from decline toward renewal and regeneration. These processes also call for the integration of the collective intelligence of a community with expert knowledge (Park, 1993,1999). Through the collective redesigning of old parks, vacant lots, and brownfield sites into productive landscapes, residents can simultaneously engage in deliberative democracy and practice solidarity and cooperation, which used to characterize American civic life (Sanoff, 2005; Horrigan, 2014).

2.3. Social capital

In the 1990s, sociologist Robert Putnam began to use census data on voting, volunteering, and participation in civic life to show a shift from a society of civic mindedness and cooperation to one dominated by individualism and private interests (Putnam, 1995; Lane, 2000). Many factors have played a role in this phenomenon, including women entering the workforce in mass and the influence of media such as television, the Internet, and social media, which are consuming an increasing amount of the spare time of citizens and limiting their ability to socialize. A 2010 resident survey of a California master-planned community indicated that residents would socialize with neighbors for only a few minutes a week and would spend virtually no time talking to strangers in public places (Ruggeri, 2009).

Although socialization continues to exist, it has taken on new forms and people are favoring a "bonding social capital," or socialization based on shared religious beliefs and lifestyles over the more democratic and civic-minded "bridging social capital," whereby people interact across socioeconomic, political, and religious boundaries (Putnam, 2003). Researchers have operationalized social capital as the result of trust, reciprocity, norms, social agency, and diversity (Onyx and Bullen, 2000; Putnam, 2000, 2001, 2003). Similarly, proactivity and social agency indicate a willingness to take the initiative to preserve one's neighborhood. Tolerance and diversity necessitate acceptance of social differences and ethnic diversity (Onyx and Bullen, 2000). By providing opportunities for social capital construction, community design is integral in redefining a community.