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Increasing levels of public participation in planning using web 2.0 technology

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CONTENTS

Contents	ii
Abstract	ii
Acknowledgements	ii
Introduction	1
Public participation in the current context	2
Successful participation: towards an evaluation	3
Evaluating web 2.0 applications and participation	4
Evaluation of process	4
Evaluation of outcomes	6
Conclusion	8
References	10

Abstract

Public participation or consultation has been considered a key component within the planning arena for over thirty years, and an increased emphasis is at the heart of the 'localism' agenda outlined by the current Coalition government. Limitations inherent in traditional methods of participation have been well covered within planning literature, whilst research exploring innovative methods of engagement such as the use of web 2.0 technologies is in its infancy. This research identifies and evaluates these methods against process and output criteria in order to better understand their effectiveness as tools for engagement over and above traditional methods. We conclude that employing web 2.0 based methods has the potential to increase levels of engagement; however, much of the eagerness to do so should be tempered given the prevalence of systemic barriers to participation which transcend the boundaries of online and real worlds.

Key words: public participation, web 2.0 technologies, process and outcome

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Introduction

Concerns to facilitate public participation within, and in support of, planning have been a durable and extensively debated topic since at least the early 1960s. The rationale for academics and policy-makers to agonise over this issue, and the merits or benefits of public involvement in planning, has also been roundly discussed during the intervening years. There has, of course, been considerable recent academic attention focused on the qualities of participation within the UK planning system (Irvin and Stansbury, 2004; Baker *et al.*, 2007; Parker, 2008; Bailey, 2010; Brownill and Parker, 2010); and given the Coalition government's expressed desire to 'put (power) into the hand of local people' (DCLG, 2010a) it seems that in a new political era this interest in public engagement shows no immediate signs of diminishing (Allmendinger and Haughton, 2011).

In the current political climate, and with a growing emphasis on participation that contrasts sharply with the reality of low and declining levels of engagement in a digital age (Feezell *et al.*, 2009; Evans-Cowley and Hollander, 2010; Evans-Cowley and Griffin, 2011), this paper seeks to explore current technological innovations used in community involvement within planning. Specific regard is given to web 2.0 technologies which allow the end user an 'in-network' experience and provide a platform for enhancing levels of social collaboration or two-way communications (O'Reilly, 2005; Pascu *et al.*, 2007; Batorski and Hadden, 2010). Social media websites such as YouTube, Flickr, Facebook, Bebo and MySpace are founded on a web 2.0 environment.

Drawing on the conceptualisation of both 'process' and 'outcome' participation methods (Beierle and Cayford, 2002), this paper considers the context in which the participation takes place, and seeks to highlight the extent to which the use of web-based techniques can generate new spaces of participation and overcome established patterns of exclusion – an issue that assumes a particular importance given the UK Coalition government's stress on participatory democracy and neighbourhood planning (DCLG, 2010b). The focus on web 2.0 technologies and social media was also deemed appropriate due to its increased use as a potential participation mechanism. To this end, this paper seeks to build on the fecund and growing body of research specific to its implementation within the planning (Carver *et al.*, 2001; Wong and Chua, 2001; Weber *et al.*, 2003; Conroy and Gordon, 2004).

Public participation in the current context

Public participation in planning, albeit in a conservative form, has been enshrined within the institutional planning framework since the inception of the Town and Country Planning Act 1947 (Taylor, 1998). However, it was (at least in part) the public and professional response to 'objective' planning techniques employed during the post-Second World War period that signified a shift in attitudes towards public engagement.¹ By the end of the 1960s, participation in planning had assumed a much more prominent role following the publication in the UK of the Planning Advisory Group Report (1965), the Skeffington Report (1969) and, in the USA, Sherry Arnstein's influential paper that featured the often-cited 'ladder of participation' and its associated 'opportunities' for differential empowerment (Arnstein, 1969) (Taylor, 1998; Rydin, 1999).

More recently, of course, there has been a renewed importance placed on enhancing public engagement within the UK. This interest has partly been prompted by the former Labour government's claims and aspirations for planning and for associated local governance to embrace a more collaborative ethos and for public involvement to improve the legitimacy of planning decisions (see, for example, Brownill and Carpenter, 2007; Parker, 2008; Newman and Clarke, 2009; Bailey, 2010; Brownill and Parker, 2010). The 'empowerment' agenda (DCLG, 2008) and the reformed planning system in the post-2004 era are also testament to this and this ideological position is further strengthened following the election in of the Coalition government, with its decision to introduce into Parliament the Localism Bill, which promises to introduce some bold ideas regarding how to encourage collaborative planning, local referendums, and direct people power rather than local authority committee decision making (DCLG, 2010b).

Whilst some significant studies have highlighted the strengths and limitations associated with the rush to embrace collaborative planning (cf. Flyvberg, 1998; Yiftachel *et al.*, 2002), running parallel to this discussion has been determined attempts by some authors to critically explore the 'spaces' where public participation takes place (Doak and Parker, 2005; Brownill and Carpenter, 2007). This work has been particularly instrumental in exposing the relative effectiveness and practical restrictions associated with public participation. Often-cited benefits of public participation include increasing the awareness levels of people within the community, increased civic engagement, improved government responsiveness, and citizens' increased commitment to implementation (see, for example, Arnstein, 1969; Berry *et al.*, 1993; Day, 1997). Not all efforts to increase participation opportunities can be viewed in the same positive light: Irvin and Stansbury (2004), for example, highlight the issue surrounding the cost and potential delays which the consultation process may cause in the decision-making and policy development process. Gallent (2008), for example, also exposed the inherent contradictions that were apparent in New Labour's repeated attempts at streamlining elements of the planning system which, as a consequence, came at the expense of opportunities for public engagement (see also Irvin and Stansbury, 2004; Baker *et al.*, 2007; Gallent *et al.*, 2008). This is particularly true of attempts to include 'hard to reach groups' within the consultation

¹ See also Lilley and Larkham (2007) on the use of 'superficial' public consultation exercises employed by planners involved in British post-war reconstruction.

process (Carmin *et al.*, 2003). Gordon *et al.* (2011) draw attention to the effectiveness of the public hearing, arguing that although a public hearing can be useful in building community support and trust for new development initiatives, it is rarely effective in producing two-way dialogue: public hearings, for example, typically fail to meaningfully engage citizens in the affairs that are important to the broader community, and are often emblematic of Arnstein's 'tokenism'. Elsewhere, other researchers have identified issues of representation, with participatory techniques often only reaching the 'usual suspects' who are atypical of the rest of the population; often representing only the top socio-economic groups or comprising single-interest individuals (Newman, 2001; Irvin and Stansbury, 2004).² Cumulatively, these studies have been particularly significant in terms of highlighting the type of processes, institutional structures, and the sort of conditions that are required to enable effective public participation to flourish (Rydin and Pennington, 2000; Burby, 2003; Laurian and Shaw, 2009).

Successful participation: towards an evaluation

In accordance with the recent political agenda characterised by themes of devolved power and increased public engagement, there is a nascent body of research that explores the extent to which innovative web-based techniques have been successfully incorporated into the participation process (see, for example, Weber *et al.*, 2003; Conroy and Gordon, 2004). An emerging theme throughout this literature is the identification of technological innovations for the facilitation of public participation; particularly those based on web 2.0 platforms. Much of the research on technology has largely focused on the way in which the proliferation of Geographic Information Systems (GIS), underpinned by web 2.0 technologies, has resulted in particularly fertile outcomes in the fields of grassroots / community-based GIS and public participation GIS (PPGIS) (Craig *et al.*, 2002; Matthews *et al.*, 2005; Cinderby, 2010, amongst others).

In contrast, however, traditional methods of participation refer to those which are not based on technology and which are required by legislation, such as the public inquiry or hearing, focus groups, exhibitions, displays and more recently non-web based innovations such as 'planning for real'. To some extent, these methods have been criticised in academic texts yet they continue to underpin the approach of many organisations toward public participation (Sykes, 2003; Baker *et al.*, 2007; Gordon *et al.*, 2011). The benefits of technological approaches to participation, on the other hand (particularly those based on the internet), tend to centre on the relative accessibility of the Internet (not being confined to a specific geographic location), the relative low of cost of entry, the potential for enhanced interactivity, and the possible increased connectivity between users groups (Howard, 1998; Wong and Chua, 2001). Whilst recognising the potential of web 2.0 to deliver greater levels of participation, Wong and Chua (2001) and Gordon *et al.* (2011) also draw attention to systemic barriers: cost of interactivity especially to certain groups with restricted incomes, user diversity, data copyright costs and issues of trust and legitimacy.

² Brody (2003), for example, has discussed the longstanding issue of 'elitism' that exists within debates surrounding public participation.

Notwithstanding the useful lines of inquiry explored by Evans-Cowley and Griffin (2010, 2011), research relating explicitly to concept of web 2.0 technologies and their role in facilitating greater public participation is an emergent theme and so it is the intention of this paper to synthesise the key messages from this relatively shallow body of literature and further evaluate the role of social media in participation.

Evaluating web 2.0 applications and participation

A recent thread within the contemporary discourse on participation within planning focuses on the evaluation of what constitutes 'successful participation' (Brownill and Parker, 2010). Within this arena, several writers have attempted to qualify 'successful participation' through the design of various frameworks for evaluation (Renn *et al.*, 1993; Beirle and Konisky, 1999; Rowe and Frewer 2000). Whilst an acceptance of the need to evaluate participation exists, a consensus over the way in which participation mechanisms should be evaluated is yet to be reached in academic research (Frewer and Rowe, 2004). Nevertheless, these studies tend to fall into two camps. First, there is a focus on the extent to which the *process* of participation should be regarded as being important for successful public engagement. Secondly, there is debate as to whether attention should solely centre on the extent to which the final *outcome* of a particular public participation exercise should be regarded as being successful (see, for example, Laurian and Shaw 2009; Rauschmayer *et al.*, 2009).

Other authors have developed frameworks for the evaluation of specific public participation cases (Renn *et al.*, 1993; Rowe and Frewer 2000; Stern *et al.*, 2009); and Beierle and Cayford (2002) go further in providing a framework for the evaluation of multiple public participation cases. The model designed by Beierle and Cayford (2002) is particularly useful as it provides a tool for the analysis of both the 'process' and 'outcome' participation methods, whilst also considering the context in which the participation takes place. The following section focuses primarily on the way in which web 2.0 technologies have the potential to engender greater participation, particularly amongst those who are considered 'hard to reach' (Meijer *et al.*, 2009; Nakki *et al.*, 2011). From this evaluation we draw conclusions as to its worth as a participative tool and move forward the research agenda via a series of recommendations. The findings are organised as an evaluation of both process and outcomes.

Evaluation of process

One of the process goals of the participation process is to engender quality deliberation (Beierle and Cayford, 2002): quality deliberation is that which is characterised by the ability to engage with various actors and participate in well-reasoned debates which take place in the context of reciprocity and mutual respect (Smith *et al.*, 2009). Dryzek, (2009) argues that quality deliberation also promotes the capacity building of those privy to arguments presented during the planning process which ultimately leads to more informed, representative decisions.

It could be argued, therefore, that a web 2.0 'networked' interface is well suited to facilitate deliberation, giving actors the opportunity to discuss, listen, and reflect on various issues (Orr, 2007; Chadwick, 2009). The quality of online deliberation has been researched by Smith *et al.* (2009) in the context of an online forum debate, with results suggesting that online deliberation enhanced capacity-building attributes as evidenced by the shift in policy preferences of the participants, over and above those in a control group who were exposed only to 'hard copy' information. Furthermore, Meijer *et al.* (2009) suggest that online discussion can be used as a 'digital thermometer' or listening device, increasing the sensibility of local governments, particularly in respect of the 'hard to reach': thus providing another means of access to those communities that may lack the social and financial capital to navigate the planning system.

Beierle and Cayford (2002) also identify 'responsiveness of the lead agency' as being significant in successful 'processes' of public participation, with two-way communication from government and organisations seen to be particularly important to members of the public. In this sense, social media provides new platforms for the government to be responsive to its electorate. There is a strong correlation between the potential of these new media platforms to respond to calls for the 'opening up' of local planning to increase democratic control by bringing 'others' into the decision-making process (Ellis, 2011).

Notwithstanding this immediate potential, Meijer (2009) is also mindful of the fact that the types of people who are most actively involved in online deliberation tend to replicate the population who contribute in traditional deliberative methods of public participation. This raises the obvious concern over the level of representativeness associated with the use of social networking technology (Orr, 2007; Pettingill, 2008; Smith *et al.*, 2009). Orr (2007) goes further and suggests that although web 2.0 provides new avenues for political deliberation, the typical internet user is more concerned with pop culture pursuits than issues of politics and so the internet may, in fact, detract from constructive political debate. Nonetheless, social media cannot be disregarded as a facilitator of public participation due to its ability to engender greater numbers of participants (Westling, 2007; Chadwick, 2009). Facebook alone has 500 million active users, of which 50% log in on any given day; and, according to Westling (2007), its size and reach make it an ideal platform to encourage participation in a way that connects members of real-world communities (geographic, ideological, or otherwise).

Whilst there are discussions surrounding the extent to which social media platforms can engender quality deliberation, Facebook and other similar applications do provide an invaluable tool to increase political mobilisation. Recent high-profile examples of such mobilisation shaped, at least in part, by internet debates include the Obama presidential election campaign (Westling, 2007; Sanson, 2008) and the political events in Egypt whereby a revolution was sparked by young urban, middle-class intellectuals who used social media to aid the championing of their cause (Tapscott, 2011). Although the internet has been widely credited for contributing to the political upheaval in Egypt, Gerodimos (2008) also warns that there is still a dependence on 'old' mass media as a way of organising political protest particularly amongst young citizens. Furthermore, questions have to be asked over the extent to which the use of social media can provide a new platform for local

people to 'brainstorm' about the kind of community in which they want to live (Tapscott, 2011).

When considering why people participate, the motivational factor which compels people to do so is usually a particular grievance or conflict over a contentious planning issue: as demonstrated by residents of Brayton, North Yorkshire who have used an online petition website to mobilise against the siting of travellers sites in their village (Evans-Cowley, 2010). It seems that conflict is often a catalyst for generating levels of public engagement in the planning process and, as Rydin (2011) points out, viewed through the prism of neighbourhood planning – as highlighted by the recent rhetoric promulgating from the UK Coalition government – this is not the type of parochial public participation that the new localism agenda was envisaging.

In addition to the challenge of encouraging broader civic interest, Beierle and Cayford (2002) also raise concerns over the degree to which web 2.0 technology is accessible to the public (Craig *et al.*, 2002). Accessibility is a concern on two fronts: in terms of the usability of the software (Haklay and Tobón, 2003), and with regard to the accessibility (and reliability) the software and internet connections. Taken together, these issues tend to limit the number and diversity of participants that can participate in a networked dialogue (Wong and Chua, 2001). To some extent, these accessibility issues are militated against as recent studies highlight that web 2.0 technology is not considered elitist by the public (Hart *et al.*, 2008; Chadwick, 2009; Bryer, 2010). It should be remembered, however, that the internet remains the enabler of such web 2.0 technologies and so exclusion may still be an issue, particularly amongst groups such as those living in rural communities, the disabled and those who are disadvantaged socio-economically (Bertot *et al.*, 2010).

In addition to concern surrounding connectivity, there has been some apprehension regarding the way in which the most effective use can be made of the local expressions of interest posted via social media (Coleman and Gotze, 2005; Batorski and Hadden, 2010; The Young Foundation, 2010; Lampe *et al.*, 2011). There has, of course, been some considerable academic attention given to how these types of local knowledge can be used in a way that can nurture community engagement (Sandercock and Atilli, 2010; Sarkissian and Hurford, 2010). Nevertheless, given the recent emphasis placed on renewing participatory democracy through planning, there is perceptible anxiety surrounding the degree to which communities will have the necessary skills to discuss the merits of development projects – even if web 2.0 technology allows for widespread online 'surface' debate surrounding a particular issue – without a reliance on professional planners and elected members performing the democratic negotiating role on their behalf (Allmendinger and Haughton, 2011; Tewdwr-Jones, 2011).

Evaluation of outcomes

Arnstein's ladder (1969) has been consistently used as a measure of public participation in the past (Tritter and McCallum, 2006) and it remains a useful model by which we can begin to benchmark the outcome impact of social media participation. Situated within this analytical framework, Cutting (2009) is rather dismissive of the notion that web 2.0 technology can be used as an emancipatory

tool to facilitate 'better' planning outcomes. By drawing on examples of its implementation by local authorities within England (Bradford, Redditch, Torbay and Stockport) he suggests that it is possible to place the use of social media within the realm of 'tokenism', as it was found that the technology was used, in the main, by these local authorities as means of broadcasting certain types of information. Nevertheless, Cutting (2009) also recognises that other local authorities have made a concerted effort to encourage a degree of deliberation using two-way communication: Coventry, for example, can be regarded as an authority which recognises that 'networked' dialogue is essential for meaningful consultation. In a related fashion, Laurian and Shaw (2009) stress that the importance of encouraging reciprocity in communication is important as the outcomes of certain planning decisions might have been different if more citizens had been informed of the ways by which they were entitled to contribute their views (see also Evans-Cowley and Griffin, 2011).

It is also recognised that even those who do not engage in deliberative discussion online have the potential to be educated and better informed by the presence of online environments for deliberation via listening and 'lurking' (Coleman and Gotze, 2005). Gustaffson (2010) found that passive or 'accidental' participation may occur through social media due to people being notified and exposed to the activities of others involved in political discussion. Whilst there is no guarantee that those exposed to such involvement will themselves engage, it could be assumed that a degree of knowledge may be gained from such exposure. Coleman and Gotze (2005) also demonstrate the benefits of online deliberation in terms of capacity building over and above face-to-face interaction in a physical setting.

Web 2.0 technologies can also act as opinion polls and data-gathering devices (Evans-Cowley and Griffin, 2011) and, within the UK context, sites such as Fixmystreet (www.fixmystreet.com) enable the reporting of vandalism and anti-social behaviour to be spatially referenced via geo-tagging technology. These are then brought to the attention of the respective authorities who are given the opportunity to address the issues and confirm via the website their status once resolved, thus representing a positive outcome (see, for example, <http://barnet.fixmystreet.com>). Whilst a cynical view might be that this mechanism ranks low on the participation ladder, it could be argued that it in fact represents partnership, which, of course, sits within Arnstein's categorisation of citizen power. Using this interpretation, this level of involvement promotes a sense of legitimacy to participation when a problem is acknowledged and then subsequently resolved. In other ways, the assembling of this local-specific information via online discussions in part also strengthens the quality of local intelligence required to underpin the quality of community decision-making: it ensures that there is a more robust planning process, resilient to appeal and legal challenge from aggrieved individuals. Of course, obvious questions are raised here regarding who collects, collates and acts on this information (Rydin, 2011). Nevertheless, using this technology as a means of collecting more information regarding places and how they change over time also provides the local community with a basis for any conceptualisation of good local sustainability – an important point, given the Coalition government's emphasis on creating a planning system that can deliver holistic sustainable outcomes through a robust neighbourhood planning framework (Tewdwr-Jones, 2011).

In spite of these positive aspects to web 2.0 technologies, there is a certain level of difficulty associated with ascertaining the extent to which online participation has been used to improve the quality of outcomes. Research using case study and testing methodologies reveals significant barriers to the use of online participation. Evans-Cowley and Griffin (2011), for example, posited that the implementation of their social media campaign was treated with caution by local authority officials and elected members as it did not form part of a statutorily-integrated engagement plan, whilst there were also difficulties encountered by local government policy-makers in terms of understanding the meaning of the data collected (see also Cutting, 2009).

In some ways, the reforms being proposed by the Coalition government's localism agenda might create opportunities for mediators and translators in the system, where local authority planners can work more closely with communities – including hard-to-reach groups – to reach more considered planning outcomes. Viewed in this way, the use of web 2.0 technology is ideally placed to encourage reciprocity in communication between different actors in the development process and this certainly relates closely to the stated social goal of 'building trust in institutions' (Beierle and Cayford, 2002). Of course, 'plundering', or even manipulating, the online information created by local communities also raises issues of trust, reciprocity and ownership, all of which are germane to the use of any multimedia platform (Sandercock and Attili, 2010). Additionally, with the current political emphasis placed on local referendums rather than local-authority decision-making, the question remains over the extent to which participatory democracy and representative democracy can coalesce. The obvious danger here is that, in some areas, communities will call upon social media as a means to resist development at all costs with the outcome being that development 'pushed' to 'unsustainable' locations of least resistance.

Conclusion

Public participation has been a central tenet of planning discourse for over thirty years, with each generation trying to improve access and interactivity to hard-to-reach people (Evans-Cowley and Hollander, 2010). As we progress into the second decade of the twenty-first century, the growing availability of high-speed Internet access and the propagation of social networking tools have ensured that new forms and processes of public participation have the potential to connect to a 'localised' UK planning system where a great emphasis is being placed on participatory democracy.

Whilst there has been some discussion as to what constitutes 'successful participation' (Renn *et al.*, 1993; Beierle and Konisky, 1999; Rowe and Frewer 2000), consensus over the way in which participation mechanisms should be evaluated is yet to be reached in academic research (Frewer and Rowe, 2004). Drawing on the 'output' and 'process' model designed by Beierle and Cayford (2002), this paper has explored the effectiveness of web 2.0 technologies as a participative tool set within the context of a more locally-focused planning system. In terms of 'process', these technologies have been identified by some as having the capability to cleave open new spaces for public engagement, particularly amongst those which are considered 'hard to reach' due to their cost-effectiveness and simplicity and, interpreted in this

way, they can be seen as a potential solution to revitalising participation and mobilising an unprecedented amount of people who would have views on particular neighbourhood issues. With regard to 'outcomes', the use of web 2.0 platforms does have the potential for capacity building: by providing a platform to incorporate public values, the opinions of developers and the views of local elected members in a more discursive fashion may improve the quality of decisions, whilst also resolving conflict and restoring public faith in planning processes.

This enthusiasm for the use of such technologies should not be accepted uncritically. Amongst the perceived benefits of web 2.0 technologies are a wealth of barriers to success which, to some degree, mimic those experienced by practitioners using traditional methods of engagement. Ultimately, it is suggested that only those who are already intrinsically motivated to be politically active are likely to engage in a meaningful way in an online scenario. Whilst the use of web 2.0 platforms might be ideally placed for people to discuss neighbourhood issues, there are certain reservations surrounding the extent to which local deliberation – through whatever means – together with *ad hoc* Ministerial decisions will ever reach a satisfactory conclusion over national and international obligations on issues such as climate change or energy provision. In addition, just as GIS technology was considered elitist and inaccessible by the public a couple of decades ago, harnessing social media, and the technology used to support online discussions, as a participation tool is fraught with difficulties for local authorities and local communities to overcome: most notably, using social media will require somewhat of a shift from the traditional approach, of one-way broadcast messages to the masses, toward more individual, personal two-way communication which demands open communication in the public domain.³

Despite barriers to implementation we call for a deeper exploration of the basic effectiveness of Internet-based tools to generate meaningful public engagement in planning processes. More attention needs to focus on capacity building and then to engagement via such technologies which will, over time, lead to the realisation of the potential of web 2.0 to facilitate participation. Quality of deliberation has appeared as a theme at various points throughout this paper and has a profound effect on the realisation of many of the goals of participation. For this reason it is suggested that, in terms of future research, a continued emphasis should be placed on the quality of deliberation which takes place on social media platforms.

³ There are some obvious implications of trying to encourage greater 'two-way' communication, including, amongst others, the time and resources required to bring about more personalised dialogue.

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