

Digital Participation and Access to Geographic Information: A Case Study of Local Government in the United Kingdom

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ABSTRACT: *Government policies across Europe and the United States are increasingly relying on Information and Communication Technologies to help revive public participation. Such policies more often than not take a technological perspective and assume that if information and supporting technologies are provided, they will be used and will lead to “better decisions” and greater participation in the political process. Such assumptions are seductive, but are unfortunately largely untested. With this in mind, this article presents some findings from recent research into the nature of “digital participation” in local government within the United Kingdom. It reviews current practices and discusses general understandings of public participation that can impact the way in which information is utilised in terms of access and participatory approaches. The article clearly highlights that participation is not a shared construct among all individuals and organisations involved but is a complex process with several components. These include issues to do with the notions of participation, the object of participation, the audience targeted and methods deployed, and the expected outcomes. Failure to appreciate the Web of relationships among these facets and the way in which people adapt and reinvent technology and information to fit their needs is likely to undermine future initiatives leading to widespread disappointment. Given that the issues discussed in this article are generic in nature, they also apply to participatory approaches focusing on geographic information, which is the focus of this theme issue of the URISA Journal.*

Introduction

Throughout Europe, governments have been vigorously pursuing policies that develop electronic government to deliver services to citizens and business. Examples include the Information Society initiative at the European level (see Craglia and Masser 2002) and state-driven policies such as Information Age Government, in the case of the United Kingdom (UK). Much of this activity has assumed that the introduction of Internet technologies will naturally lead to increased efficiency in how government operates, both in terms of services such as the payment of local taxes and increased participation from citizens in government activity. It also exists in a context where political participation has been in decline in traditional avenues, such as voting at all levels of government, with a continuing interest in pressure group membership and “direct action”. As a result, in the UK, central government has been trying to modernise the ways in which local councils operate. This includes the direct election of mayors, cabinet-style structures for the ruling group in the council, and an increase in public participation, as exemplified by policies such as Best Value, which aims to continually improve and democratise government services. There is, however, a blind faith that new technology will provide a re-invigoration in democratic activity at all levels and particularly participation by younger citizens. Recent research by Smith (2001) questioned aspects of this policy area in terms of Internet-based public participation in UK local authorities, or “digital participation”. The research focussed on local authorities that had utilised methods such as electronic mail and websites to engage with their citizens. By using detailed case studies, they

were able to look behind the “digital facades” that these methods presented to develop a deeper understanding of public participation both in terms of local government officers and citizens. In particular, the assumption that there is a shared construct of “public participation” for all actors involved was questioned.

This article reports some of the findings of this research on public participation in the digital age and presents recommendations that begin to explore the relationships between this emergent topic and interest in using Geographical Information Systems (GIS) for access to geographic information (GI) and public participation. The remainder of this article is divided into two sections, with the first exploring digital participation as it relates to the UK context, and the second highlighting three issues for consideration that stem from this research. They include the relationship between access to information and public participation; actors varying notions of access; and the need to look at both the meaning of public participation and the specific issues raised by the use of GI and related technologies in greater detail.

Digital Participation in the UK

To provide a benchmark in the rapidly evolving field of Internet-based participation, a survey was carried out in the spring of 1999 of over three quarters of all UK local authority websites (i.e., those that contained “gov.uk” in their Universal Resource Locators). This was partly based on a central government list and covered several services and local government functions. Particular attention was given to statutory land-use planning and environmental initiatives because they have a proven track

record of public participation as central to their processes. Owing to variations in the information and the methods of communication they contained, the participatory nature of these websites was classified, with the subsequent selection of several leading authorities for initial investigation and then the analysis of three in-depth case studies in three different areas of policy application (local, mixed, and strategic).

The classification of the websites was built on Arnstein's (1969) "ladder of citizen participation," a model that outlines the variation in power relationships between citizens and their government. It presents a continuum ranging from lower "rungs" of participation where citizens are merely informed ("information"), to intermediate instances where the public is asked their opinion ("consultation"), and to the upper stages where they have full control on decisions made ("citizen control"). The components of this model have also been discussed in the context of Public Participation GIS (PPGIS) by Carver (2002) and Weiner et al. (2001). In terms of the survey, websites were seen as weak and non-participatory if they provided little relevant information or no contact details, reflecting the lower rungs of the model. In contrast, they were classified as more participatory when entire policy documents and different methods of response were promoted or where there seemed to be novel ways for citizens to contribute in open forums (such as "graffiti walls", message boards, and chatrooms).

From the 300 or so websites surveyed, none could be placed in the "citizen controlled" category, which is not surprising given that the survey focused on local government-maintained websites. The examples of best practice were classified in the "consultation" category (13% of those examined reflected Arnstein's "consultation" bracket), while the vast majority of the other sites were well below this level. The principal features of the consultative category were information being provided as either an aid to communication between citizens and officers or as complete documents and participatory materials. The forms of communication also varied from simple media such as telephone numbers and the times of meetings to less familiar ones, including e-mail, chatrooms, and bulletin boards. In this classification, those websites that appeared below the most participatory examples reflected the "information" category from Arnstein's model and varied a great deal in their content and usefulness. The most effective fell into the "information providers" (29%) and "guide to services" (28%) categories. The former provided Web-based information about participatory activities or how to contact officers who would be able to advise potential participants about a consultation, while the latter focused on "a-to-z of services" (electronic phonebooks of local authority services). Both categories can be seen as less participatory than the first group, as they require knowledge of the ways in which local authorities are organised as well as the consultation processes of statutory land-use planning. The remaining websites were either "advertising" their local authorities (16%), typified by tourism and local economic development information that attempted to encourage people to visit or invest in their area,

or appeared to offer little ("very limited content" group, 6%) or no information or access (the remaining 8%).

These findings indicate that Internet-based participatory activities of local government in Britain are really at an early stage. Although almost every authority has its own website, the contents and structure vary enormously, and only 13% could be classified as "participatory" in any meaningful sense. As well as providing a benchmark for future studies, the survey also allowed leading examples to be explored in greater depth. Following interviews in several local authorities across Scotland and England, three were selected for in-depth case study analysis involving interviews and the examination of multiple sources to help understand the activity behind the digital *facades* of their electronic communication and the actors' views of public participation. The first example was a non-statutory land-use planning consultation exercise relating to housing. The second example was a strategic policy consultation exercise that piloted community planning and engaged with participants from a number of sectors including the community. The final example was a mixed policy area that used advanced technologies to support approximately 60 digitally connected members of the authority's citizens panel. This group was given policies to discuss, asked to gather information online, disseminate and collect their ideas through facilitated chatrooms, and advise elected members through several means, including in-person at specially organised meetings. The views of local authority officers who were involved in these activities and those citizens who had chosen to communicate online (by e-mail in two cases and through chatrooms in the third) helped to understand the notions of participation that existed in the three case studies. During the course of the research, it became clear that digital methods could not be looked at in isolation, and so more traditional methods were also investigated (such as writing a letter or contributing at public meetings).

It should be reiterated that some good examples of digital participation already exist, but the field as a whole is very much in its infancy. A key finding is that actors' views of participation vary in many different ways. These differences relate to the underpinning theoretical and philosophical meanings of participation that actors bring to exercises, the purposes that participation serves, the objectives that can be pursued, the issues involved, the audience being addressed, and, importantly for participatory approaches that use GI, the methods deployed. Public participation does not have a universal meaning. Even in the best examples, where a great deal of training and support existed, actors felt unfulfilled at the end of consultation exercises, even though they noted unexpected benefits such as learning new skills (in the case of some citizens) and readily responding to a limited number of e-mail queries (for some officials).

The complexity of public participation is underestimated because some view it as a linear process with neatly sequential stages such as a local authority initiating an exercise; placing documents on deposit for public scrutiny; encouraging, receiving, and analysing responses; presenting the findings; and altering policy accordingly. The process is thought to pass through these (tem-

poral) stages without those actors involved altering their ideas of what “participation” is. This simplistic view is a poor reflection of what actually happens, as an activity is shaped by the actors’ initial and developing perceptions of what participation means and what it is used for, during, and long after the perceived “end” of the consultation exercise.

To examine the complexity of public participation in this context it is useful to consider different matrices that can be drawn up under five components of participation: issues for consultation, underlying notions of participation, methods, audiences, and outcomes (actual or desired). The local decision-making case study focusing on housing gives a clear example of this. An interim policy document was published that focussed on the authority’s housing allocation and where new dwellings should be constructed (the “issue”). The authority’s underlying “notion” of participation was that they wanted as many “representative” people to contribute as possible and to be seen to have their voices heard. The “methods” used to engage with a certain section of the public, or “audience” (in this case, “residents” rather than other agencies or business), were many and varied. Some of these methods of participation were supplied by citizens or activists (letters of concern, standard letters, acting like a vote, and petitions) rather than the authority (feedback slips from a leaflet delivered to all residents in the borough, comment forms at public meetings, Web-based online feedback forms, and e-mail). The methods provided or sent by the citizens differed from those of the authority in format, style, and tone. In the other two case studies, the methods used and the issues being addressed were different, with particular outcomes for each. In general, audiences will decide what methods are suitable for them to both access and contribute information, and it should be recognised that some groups are more likely to use particular methods than others are. It is important to note that the citizens’ choice of methods can play a role in shaping the outcomes of an exercise, but that they are only one component of the five that can influence public participation.

This situation becomes further complicated as the current pursuit of public participation in numerous government-related activities can lead not only to “consultation fatigue” but to misrepresentation if the same public voices are heard. Varying methods are therefore necessary to gain wide and varied opinions. Additionally, in these top-down government-driven situations, it should be understood that not all issues are suitable for public consultation. For example, given the complexity of an issue such as Britain joining the Euro, should laypersons participate except through enacting their wills through the ballot box and their representative professional politicians?

Aside from the issues that can be consulted on, variations in the underlying “notion” of what participation is about are crucial. For example, in a local case about housing, the view of the officers leading the consultation was that participation is about gathering the opinions of a representative audience and gaining support for their policies. This notion, however, sits in the context of ideas in other departments in the authority and other institutions. As a result, there also may be an internal or

government “audience” with ideas about the appropriate external audience, the methods used, the issue under consultation, and what the outcomes should or could be. Therefore, multiple notions need to be mediated. Similarly, the citizens’ notions were not uniform: some felt that they were duty-bound to participate if asked by their local authority, while others were motivated by concerns about the value of their properties in relation to new housing developments, thus displaying the familiar “not in my backyard” (NIMBY) syndrome.

The findings of the research suggest that even the best examples of public participation are often only driven by well-meaning individuals in a rather ad hoc fashion, without the process being “owned” by the whole organisation. This may be a reflection of the early stages of this process, but there is a strong need for local authorities to provide appropriate policies and strategies so that officers’ and citizens’ expectations are clearly managed, developing and nurturing a relationship of trust. Public participation is not a unique and shared construct, and achieving meaningful participation is a very difficult challenge. It cannot be seen as an add-on to other activities but needs to permeate all activities because citizens tend to view their local authority as a single entity. Therefore, it is not fruitful if one unit in one department launches very open and consultative exercises when the rest of the authority remains closed and bureaucratic. Moreover, different methods of participation include and exclude different groups (Alty and Darke 1987), and in this respect digital participation is no different from other forms, although it offers particular opportunities and challenges of its own.

One of these opportunities/challenges is the increased “access” to political processes that the technology can afford. Some of the interviewees felt that technology had helped them to participate where it would not have been as readily possible before. For example, many parents felt that they were too busy to attend local public meetings as they had their children to look after. E-mail offered them the opportunity to respond from their own home. In another instance, an interviewee had mobility problems and was wary of crowded places. The technology had allowed participation in a project where this person could pause from chatroom discussions without feeling embarrassed. For others, e-mail and online information were far more convenient to use, given that all had the Internet at home, and it was cheaper to respond to than mail. In one case, the citizens involved had mixed abilities and would not normally have had the (mainly financial) resources to access the Internet. Following training, and the authority supplying equipment to some participants, they found that the participation process had allowed them to make new friends online, keep in touch with relatives around the world, and learn new skills. As noted above, these were outcomes of the participation activity that the authority did not anticipate at the outset of the project.

There is, however, a wider issue about what “access” can mean in the context of digital participation, reflecting technical, social, and political aspects. Access has not been seen solely as access to digital infrastructures but also as an individual’s ability to access

“networks, machines, information and know-how of IT [information technology]” (Dutton 1999:306; after Bryden et al. 1995: 16). Kling (1999:58) outlined two types of access: technological and social. Technological access involves “the physical availability of suitable equipment, including computers of adequate speed and equipped with appropriate software for a given activity”. In contrast, social access comprises of the “know-how” needed to operate the equipment, reflecting “a mix of professional knowledge, economic resources, and technical skills to use technologies in ways that enhance professional practices and social life”.

In a digital participation context, ideas of access presented by Dutton, Bryden, and Kling have to be extended relating to ideas of power within a democratic framework (i.e., the ability not only to access and understand the information, but also to make effective use of it by leveraging power and affecting outcomes). This could be referred to as “political access”, which could also encompass the concept of an “equality of rights” based on the premise that current social and economic inequalities can undermine “formal equality”—the “legal right” to participate, and that the extent to which this occurs needs to be understood and challenged (Percy-Smith 1995:8). This may be particularly true where the differences between the information/digital “haves” and “have-nots” are rapidly increasing. In relation to this, Tsagarousianou (1998: 171) noted that even if a right of access is readily available to all citizens, will complimentary measures of their “competence” be developed? Will access to information naturally lead to a more informed public?

These questions are not easily answered without focused longitudinal research. There are signs, however, that at least some of these concerns are being taken on board. For example, the European Commission’s e-Inclusion policies for member states (Commission of the European Communities 2001) attempt to tackle social exclusion in the information society, and, in particular, disadvantaged groups such as those with low incomes or disabilities. Education, training, and employment for citizens from member states are also discussed in this document, and these two approaches are very much about trying to sew together the digital divide and reflect, to an extent, current understandings of both physical and social access.

The document raises important issues that currently limit access to the information society such as prohibitive costs and the need for training to make people more digitally literate. There is also a recognition that a significant minority of those who do not currently have access to the “information society” do not wish to become involved. In this respect, a survey revealed that around 27% of non-users “are not interested in the Internet or don’t want to use it” (Ibid.:13). Therefore, it is important to recognise that efforts to increase the awareness and uptake of digital access must not be to the detriment of traditional forms of consultation and service delivery.

From this discussion, three related areas need addressing in terms of the debate for participatory approaches that use spatial information and access to GI.

Three Issues for Consideration

The first of these issues is a need to clearly identify the relationship between access to information and participation; the second relates to the different notions of access that can exist that underpin public participation; and the third is a need to look in greater depth to both the meaning of public participation and the specific issues raised by the use of GI and related technologies.

Relationships between Access to Information and Public Participation

Much of current information policy in Europe is geared primarily toward economic objectives, i.e., opening up public sector information to develop the information market and create jobs (see Craglia and Masser 2002). There are, however, signs that broader policy interests, particularly in the environmental field, are pushing for greater access to public sector information in general and GI in particular, for policy monitoring and evaluation. The Infrastructure for Spatial Information in Europe initiative (INSPIRE, www.ec-gis-org/inspire) is a good example of this emerging interest. INSPIRE is geared toward increased information sharing between government bodies from local authorities to the European Union. Although this may not have a direct impact on public participation, the change in local authorities’ attitudes to collecting and disseminating information for others to re-use may benefit those interested in obtaining that same information for participatory practice, be that inside the authority or within communities or information services.

There are also many initiatives at the national and regional levels in Europe that are developing spatial data infrastructures with the purpose of sharing data among different organisations in the public and private sectors for the purpose of better governance, business, and more informed citizenship (see Craglia et al. 2002). Although participation by the public is not a specific focus of such initiatives, there are also some good examples of this kind, such as the Datashare Project (<http://www.datashare.org.uk>), which is a Web-based GIS being developed for the partners of a UK local authority’s community plan (including the authority, local businesses, voluntary groups, other key public sector agencies, and citizens). Varying levels of access are given to different groups (owing to information sensitivity), including citizens, and those accessing the website can overlay various policy areas. This allows people to identify areas of greatest need and to see if any areas are being missed, helping to target resources appropriately.

In some ways, access and participation are part of the same continuum. They both evolve around flows of information between actors; access to information typically only “broadcasts”, whereas participation is more interactive. The participants at the meeting addressed this by suggesting that further research is needed on the role of government in the information society, with regard to access to information. This needs to involve an idea of participation in this process and what underlying expectations the actors have. It is important to understand the relationships

that exist in this context and whether they differ from more top-down government-held-information perspectives. This leads to the second point relating to what “access” may mean.

Notions of Access

As noted above, “access” can take many guises and there is a need to build upon the initial ideas outlined here. There is clearly an issue about the difference between access to public sector information for political purposes, access that is intended for commercial development, and the information that may be held or generated at local levels to feed up to decision-makers. These “purposes” will lead to different expectations of what access could mean, have wider impacts on the success of a commercial enterprise, and influence the fostering of informed participation or decision making.

Niles and Hanson (2002; after Hanson 2000) noted the webs of social relations that occur in relation to access to information, whether this is in digital or traditional environments. These webs offer the starting points for developing theoretical positions that can help to understand the variations that exist for different groups in terms of their views of access. The webs may take the form of those interested in access from the point of view of industry, research, policy/decision-makers, other public sector agencies, and citizens.

What is “Public Participation” in a GI Context?

Two recent articles (Carver 2002, Weiner and Harris 2002) specifically raised important issues in relation to Public Participation GIS. Looking ahead at promising avenues for research, it would appear that further work is needed in exploring both the meaning of public participation for the different actors involved in the process and the particular opportunities and challenges that the use of GI(S) creates.

One of the main areas of difficulty with Smith’s (2001) research was that no established body of literature discussed public participation in digital contexts. This work selected ideas from the democratic and planning theory, where a tradition has developed in looking at public participation in its various guises. This was coupled with a social construction of technology perspective, so that the social influences surrounding digital participation could be approached and better understood. This is one way to examine the subject, but a plethora of definitions exist for public participation. Weiner et al. (2001) suggested that, on the top rungs of an Arnstein model, the public has a full voice through community organisation and that for the purposes of their text public participation is seen as grassroots community engagement. Even within these relatively focussed definitions, there are issues that relate to what participation may mean for those involved when community groups make the final decision. The democratic theory suggests that there is a problem with groups making decisions for the individual. For example, the “incompatibility problem”, where individuals are “dependent on the assent or actions of

many others to secure what they want” (Christiano 1996:25), means that all participants must relinquish some of their utility or desires in order for a consensus to be reached. Some issues, and particularly those of a spatial nature relating to “NIMBY-ism”, have to deal with this problem of consensus building where no one is likely to “win”.

Given, as stated above, that participatory activity can be seen as a complicated network of elements that shape each other, there is a need for greater exploration as to what participation may mean and to develop matrices that relate notions of participation, issues, audiences, methods, and outcomes. Clearly, a research programme with detailed longitudinal case studies and participant observation methodologies offers a promising avenue in which to develop these ideas.

The second line of enquiry relates to what might be specific to GI(S) that is not covered in broader issues of public participation, in general, and public participation in digital context, in particular. Here much of the recent discussion (Carver 2002, Craglia and Masser 2002, Niles and Hanson 2002, Weiner and Harris 2002) has tended to emphasise the complexity of GI, which requires more advanced levels of skill and knowledge to be correctly understood, interpreted, and used. This is undoubtedly an additional challenge to other forms of non-spatial information to which users may be more familiar. One way to address this issue would be to build on what planning terms as an “advocacy” approach: where specialists act not just as “neutral” technicians, but actively seek to exploit their knowledge for the benefit of the communities they are responsible for or are embedded within. It is in this vein that much of the research-led projects documented in the scientific literature that are as examples of best practice could be read. They are not just research projects, but also situations where researchers act as advocates on behalf of communities.

Whilst GI does pose some additional challenges, it also offers opportunities. There is much evidence to suggest that whilst public participation beyond the ballot box is (still) only limited to few cases, issues that present themselves in a local setting attract greater interest and motivation than strategic or distant ones. Hence, attempts made to foster public participation at local levels will be more promising for fuller engagement between actors and the issues involved. Within this context, GI offers opportunities because it helps define and contextualise local issues in relation to neighbouring areas and can support the development of a shared understanding of issues within a community (Craglia et al. 1999). Useful axes of research here are the development of more locally based information resources (place-based GIS), but also the potential partnerships that can be developed with actors in the marketplace so that the experimentation and demonstrators developed are not merely project-based, and as such often of a limited life-span, but can then be developed in a much wider and sustainable setting. A useful model in this case is the success of value-added services such as Upmystreet.com (<http://www.upmystreet.com>), which not only provides local information of value to existing and potential residents, but also sets the framework for developing community-based information forums, which can then be mobilised for com-

mon action (e.g., for the leverage of funds). This area of partnership between research, communities, and the market is worthy of further investigation with carefully analysed demonstrators.

Conclusion

The research undertaken by Smith and others in this and the previous issue of the URISA Journal provides a useful starting point for debate, but certain areas should be developed much further. In summary, there is a need to determine the connection between public participation and access to information, to understand that “access” can have various meanings in different contexts, and that similarly there are multi-faceted aspects of public participation that need to be analysed in much greater depth. Public participation is a complicated process, and the rather unproblematic way in which it is portrayed in much of government policy and academic literature should be of concern. Specific to the geographic information dimension, this article has indicated that this area offers particular challenges as well as some opportunities, if for no other reason than because citizens tend to have a greater interest in “local” issues and can connect with them more readily. Hence, a place-based research programme with a strong comparative and cross-cultural dimension that enables movement from individual cases to more general issues appears to be a promising avenue to further this important area of research.

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