Association for Information Systems AIS Electronic Library (AISeL)

ECIS 2003 Proceedings

European Conference on Information Systems (ECIS)

2003

Electronic Consultation at the National Assembly for Wales

Paul Beynon-Davies University of Wales, Swansea, p.beynon-davies@swansea.ac.uk

Ian Owens University of Wales, Swansea

Michael D. Williams University of Wales, Swansea

Rebecca Hill University of Wales, Swansea

Follow this and additional works at: http://aisel.aisnet.org/ecis2003

Recommended Citation

Beynon-Davies, Paul; Owens, Ian; Williams, Michael D.; and Hill, Rebecca, "Electronic Consultation at the National Assembly for Wales" (2003). *ECIS 2003 Proceedings*. 13. http://aisel.aisnet.org/ecis2003/13

This material is brought to you by the European Conference on Information Systems (ECIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ECIS 2003 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

Electronic Consultation at the National Assembly for Wales

Paul Beynon-Davies Ian Owens Michael D. Williams Rebecca Hill

European Business Management Schoo University of Wales, Swansea, Singleton Park, Swansea p.beynon-davies@swansea.ac.uk

Abstract

Significant developments are occurring in the domain of electronic government within the UK – the use of ICT to enable re-structuring of governmental processes. In this paper we look at that subset of e-Government known as electronic democracy. In particular, we describe how electronic consultation, an important facet of electronic democracy, is being used to procure ideas from partnership organisations and citizenry in relation to the policy formulation processes at a devolved regional assembly in the UK – the National Assembly for Wales (NAfW). We utilise a process model of governance focused around the concept of the policy cycle. This process is currently being enabled at the NAfW through the development of a series of bespoke ICT systems. Such forms of ICT innovation are seen by many to be significant ways in which government may re-engage with its populace, address issues of social exclusion in the area of democratic participation and generally re-energise the democratic process.

Keywords

e-Democracy, e-Consultation

1. Introduction

The UK government has recently published a consultation document on electronic democracy (e-Democracy) (UK_Online 2002). Here e-Democracy is described as 'using new technology to energise the democratic and political life of the nation'. The consultation document also admits that e-Democracy is still a relatively untested concept.

Porebski (Porebski 2002) argues that there are three faces to e-Democracy. The first face portrays e-Democracy as the cure for the crisis in Western democratic systems. Forms of e-Democracy are seen as ways of increasing participation and mobilisation of citizens in the demos. The second face sees e-Democracy as essentially harmful to the essential principles of democracy. It is portrayed as a means of reinforcing inequalities in power and its exercise by technologically sophisticated elites. The third face sees e-Democracy as having no particular impact on democratic processes and systems. People taking this position point to studies that suggest that Internet usage on political matters tends to reflect patterns of political activism generally (Hill and Hughes 1998).

It is difficult currently to judge the efficacy of any of these positions because the topic of e-Democracy is too large an area within which to conduct empirical studies. Hence, Porebski (Porebski 2002) calls for more focused studies of key e-Democracy issues. We see edemocracy as an information systems issue. It is a key example of the impact of ICT innovation on a critical area of human activity. Therefore, research needs to focus on key technologies and key activity areas.

The UK government consultation document (UK_Online 2002) describes two tracks of e-Democracy – what they refer to as e-Participation and e-Voting. E-Participation is defined as the use of ICT to open new channels of participation in the democratic process between elections. E-Voting is defined as the use of ICT to facilitate participation in elections or other ballots under statutory control. A major facet of e-Participation is e-Consultation. E-Consultation is the use of ICT to enable consultation with the citizen on matters of policy and decision-making. The key aims of this technological innovation are to improve the effectiveness of policy formulation and the engagement of a greater proportion of the populace in this process.

This paper is a response to the call made by Porebski and others for more focused studies of e-Democracy. We describe some of the innovative work being undertaken in the area of e-Consultation at a devolved administration in the UK – the National Assembly for Wales (NAfW). We attempt to glean from this case material some of the explicit and implicit objectives of engaging in e-Consultation and the practicalities of constructing an efficient and effective e-Consultation process. We argue that ICT enablement of the policy cycle is a natural consequence of a process-view of government and democracy. We also draw some early lessons as to the utility of e-Consultation, particularly the view that e-consultation may be a significant way in which various levels of government may re-engage with its populace.

2. Electronic Government and Electronic Democracy

ICT has had a major impact on all aspects of social, political and economic activities. ICT is being used to 're-engineer' aspects of governmental processes and the relationship between government and the citizen. The interface between government and citizen in terms of services such as tax collection and benefit payment and the associated use of ICT to deliver these services via government agencies is normally referred to as electronic government (e-Government). The term tele-democracy or e-Democracy may be restricted to the use of ICT in the service of democratic processes both between government and citizen and the associated use of ICT within democratic processes in government.

The term Democracy derives from the Greek words *demos*, 'the people', and *kratein*, 'to rule' (Birch, 1993). So-called direct democracies are rare in the modern word. Direct democracy involves the members of some political grouping such as a nation state having direct involvement in the governmental process. Most modern democracies are representative democracies in which members of a political grouping nominate representatives to govern. Representative democracy generally takes the form of some form of parliamentary democracy in the Western world.

E-Democracy is a significant element of e-Government and has been be seen by some as an effective way of increasing levels of communicative rationality and moving towards the ideal speech situation. E-Democracy has been seen as a major way of improving levels of and forms of both communication and participation in democratic processes. The use of ICT for free and open communication and participation is seen by many as important to the re-invigoration of the demos, perhaps ultimately implanting features of direct democracy back into structures of representative democracy (Rheingold, 1995).

E-democracy can be defined in broad or narrow terms (figure 1):

- <u>External e-Democracy</u>. In narrow terms, e-democracy can be used to refer solely to the enablement of democratic processes between members of some political grouping and their governmental representatives. In a sense, external e-Democracy can be seen to be an attempt to introduce elements of direct democracy into situations of representative democracy (Taylor and Burt 2001).
- <u>Internal e-Democracy</u>. On the other hand e-Democracy can serve to refer to the way in which ICT is used to improve internal democratic processes within government. This we call *internal* e-democracy.
- <u>Local e-Democracy</u>. Local e-democracy occurs where local groups use ICT to create democratic forms, fora and processes to facilitate political interaction within the community itself. Local e-Democracy is e-Democracy in the community and in civil society. Civil society is the zone between the state and private life in which citizens interact with other citizens to pursue a common purpose or goal (UK_Online 2002).

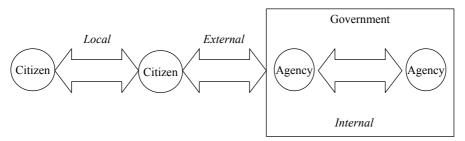


Figure 1: Forms of e-democracy

This paper is particularly concerned with external e-Democracy which is currently positioned by the UK government in terms of e-Participation and e-Voting (UK_Online 2002). E-Participation is used as a term to include four main types of political activity and interaction. It is to the first of these - interaction between citizens and government focused around government-initiated consultations – that our attention turns here.

3. The National Assembly for Wales

The British Labour Party put forward the idea for the NAfW in July 1997 as part of their strategy for the devolution of British government. The people of Wales were given the chance to vote on these proposals in September 1997, and a marginal majority allowed the go-ahead to be given for the implementation of a National Assembly for Wales. The official transfer of responsibilities from the Westminster Parliament to the Assembly took place on 1st July 1999.

Although the declared role of the National Assembly is to develop and implement policy in relation to Wales, the people of Wales are still represented in the Parliament of Westminster by elected members of Parliament and the Secretary of State for Wales. Legislation that passes through Westminster still includes Wales. Bills that apply only to Wales go through Parliament as part of the Devolution settlement.

The members of the NAfW were elected using a form of proportional representation on the 6^{th} May 1999 and are due for re-election every four years. Each member of each constituency within Wales was given two votes to elect Assembly members. The first of the two votes was used to elect a member to represent the constituency in the Assembly. An additional twenty Assembly members were elected through the use of the second constituency vote.

The NAfW under the direction of the Welsh Assembly Government (WAG) has the power to modify UK legislation and specifically to develop and implement policy in a range of areas such as agriculture, education and training, health, tourism and transport. The NAfW is able to:

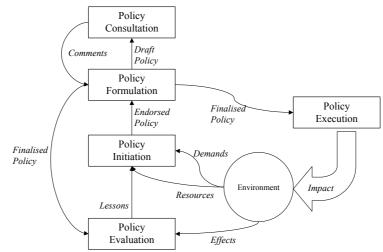
- fund, direct and make appointments to health service bodies in Wales and hold them to account.
- set the content of the National Curriculum for primary and secondary education in Wales.
- provide financial assistance to businesses in Wales.
- administer European structural funds.
- implement policy on care in the community.
- promote agri-environment schemes.

The First Secretary is a representative of the largest political party in the NAfW. Currently that party is the Labour party that also holds a large majority in the House of Commons in Westminster. The First Secretary appoints an Assembly cabinet from the leading party. Members of the cabinet are assigned roles from the list of assembly responsibilities.

The NAfW has a committee structure divided both on regional lines and in terms of subject areas. Assembly members are nominated for service on committees in proportion to their share of the electoral vote. Assembly members also hold plenary meetings in which broader issues are discussed and the First Secretary is available for questioning.

4. The Policy Cycle

It is possible to define government in terms of democratic structures or institutions as we have done above in terms of our description of the NAfW. It is equally possible to define government in terms of democratic processes. Using this perspective government is concerned with the processes of the policy cycle (Jones, Gray et al. 2000). This systemic



view of government illustrated in figure 2 focuses on the development of policy and its implementation. The policy process takes demands from the social/economic/political environment and resources available in these domains as inputs. Policy is the key output which inputs into the implementation process. Implementation of policy has a key impact on the social/economic/political environment and forms the starting point for the re-formulation of policy.

Figure 2: The Policy Cycle

The Information Systems domain has clearly established the benefits of a process view of organisations for re-designing activities through ICT enablement. A policy-cycle perspective on government offers a way forward for considering the re-design of democratic processes. The policy-cycle potentially offers a framework for bridging across internal and external e-democracy. ICT has a role to play in supporting each stage within the cycle. For example, ICT is important for supporting the development of evidence-based policy in the policy initiation and policy formulation stages of the cycle. Critically, it may be used for storage and retrieval of data-banks of evidence and to search for information in support of rapid evaluation assessments (Davies 2002).

Policy can be defined as a set of ideas and proposals for action culminating in a decision (Jones, Gray et al. 2000). As a refinement of the policy-cycle, democratic processes within and without the NAfW include (figure 3):

- <u>Policy Initiation</u>. WAG develops specific policy as it relates to Wales taking into account existing political demands and resources such as funding and personnel as well as lessons and evidence established from previous policy exercises.
- <u>Policy Formulation</u>. Once a policy has received political endorsement it is fed into the NAfW structures for detailed consideration. Meetings of the NafW chamber and committees agree, modify and ratify policy.
- <u>Policy Consultation</u>. Various divisions within the NAfW consult with various partner organisations and citizenry on specific policy. Policy may be re-formulated on the basis of input from such consultation.
- <u>Policy Execution</u>. Various organs of the NAfW and its sponsored bodies implement and monitor the execution of programmes arising from key policy areas.

• <u>Policy Evaluation</u>. The NAfW has a remit to evaluate the impact of policy initiatives in particular areas. This involves attempting to relate issues of policy to impacts upon the social/economic/political/environmental landscape of Wales.

5. Electronic Consultation

The NAfW is committed to ensuring full opportunities for consultation and participation in its work. That commitment is also placed on its sponsored bodies such as the Welsh Language Board and the Welsh Development Agency. In doing so the NAfW has a vital role in promoting and encouraging an appropriate context for enabling people to participate in policy-making in the most accessible way possible. The NAfW's commitment to consultation rests on a firm legislative foundation within the Government of Wales Act 1998 and its obligations under Standing Orders. Many of the functions transferred to the NAfW under that act also carry a statutory requirement of consultation.

There are also a number of practical reasons for looking to e-consultation within this institution:

- Like most of the new devolved institutions in the UK the administrative personnel within the NAfW lack experience of policy formulation and consultation.
- An increasing range and number of policies are now generated from the NAfW. Partnership organisations have complained to the NAfW over the lack of standardisation of policy documentation produced by this institution and the difficulties of receiving feedback on their responses to policy.
- The UK government recommends that policy consultation be performed for a minimum of eight weeks and for a recommended period of 12 weeks. Because of resource constraints, such timescales are frequently difficult to manage with current processes.

The Strategic Policy Unit at the NAfW commissioned an information audit of its policy formulation and consultation procedures in 2001. The conclusion of this audit was that the process of consultation would be greatly assisted by using the Internet and Intranet infrastructure of the NAfW.

The NAfW are currently in the process of implementing an e-Consultation system consisting of a collection of databases and ICT systems closely integrated with the policy process described above.

Within this e-Consultation system four databases exist storing data about consultees, documents, events and external parties. The content of these databases is managed by Assembly officials through a secure administration facility, and is accessible internally through the various policy tools and/or a guidance wizard. Parts of the data are also accessible externally through the consultations website sourced from the NAfW.

These databases are used by the following ICT tools:

- <u>Document Management and Publication tool</u>. This system provides Assembly staff with templates for the production of policy documents. Policy documents can then be published via a secure document management system to the NAfW Web-site. The document management system stores planned, current and archived policy documents and may be searchable via the Internet.
- <u>Contacts tool</u>. This system allows consultees to register to receive notification of new consultations. They are able to specify which type and subject areas are of particular

interest to them. The consultees are contacted automatically once every six months by the system to encourage them to keep their records up-to-date.

- <u>Dissemination Tool</u>. This is a system for managing the dissemination of consultations through block e-mail and/or mail-merge. It also enables the creation of reminders at pre-set dates.
- <u>Event Organiser</u>. This tool is used for managing a database of events and venues. Assembly staff can define events and search the database for an appropriate venue. A number of venue suggestions are shown prior to selection. The tool invites venue managers to keep the information held about their venue up-to-date via a secure extranet.
- <u>Response Collection Tool</u>. This system is used for managing the collection of responses and acknowledging receipt of the same. Responses are collected in a number of ways via the provision of a pre-formatted online response questionnaire, a free format text uploading facility, or the invitation to send a paper-based response. Automatic acknowledgements are sent to all respondees.
- <u>Voting Tool</u>. In addition to the classic feedback collected in text format, in some instances it is appropriate to ask for feedback that is capable of statistical aggregation. For some consultations an online voting form is provided. The tool is capable of counting and analysing various contributions received. As above, the system generates an automatic acknowledgement of receipt to the consultee.
- <u>Response Analysis Tool</u>. This system is used for analysing responses received. Feedback is received in a variety of formats: Set answers to a row of specific questions in small paragraph format; Free form additional information in conjunction with the answers to the specific questions asked within the consultation; Free format texts, received in digital or paper-based format. In the latter case, a manual qualitative analysis is conducted aided by the provision of preformatted response evaluation forms. When the feedback is collected via voting forms the feedback is analysed automatically and presented via a data visualisation tool.
- <u>Provision of Feedback Tool</u>. This system is used for informing consultees of the outcome of the consultation. Feedback is provided in terms of the final policy text together with clear indication of which sections were altered as a result of the responses to the consultation. For consultees that have access to the Internet, and whose preference it is to exchange information with the NAfW in digital format, these documents are made available on the Internet. For the consultees that prefer to communicate with paper-based media, the feedback is made available in printed form.

The various tools are accessible via a general toolbox or through a guidance facility. This latter facility is meant to shepherd inexperienced policy-officers through the early stages of the policy cycle, from policy initiation through to issuing the policy into implementation. As such, it constitutes a simple form of workflow system. The relationships between the tools, databases and guidance facility are illustrated in figure 3.

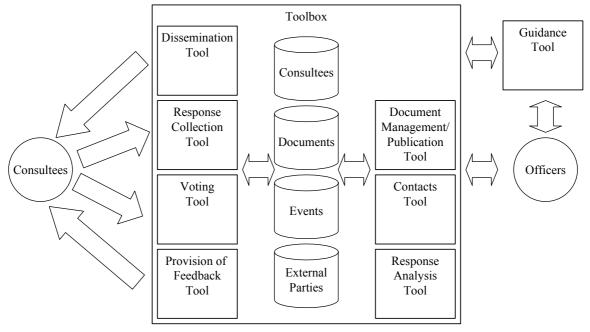


Figure 3: The e-Consultation System

6.The Utility of Electronic Consultation

Information systems and their associated ICT systems have to be designed in the sense that the key features of such systems need to be determined prior to their construction and implementation. Such key features or properties are critical ways in which we can assess the worth or success of some ICT system.

Traditionally, design features of an information system fall into one of two categories: functionality - what the system does; usability - how the system is used. One should note that both functionality and usability are inherently related to the place of the information system within the context of some human activity system. Hence to functionality and usability we should add utility. Utility or efficacy is an important but neglected feature of an information system. Utility concerns the contribution the information system makes to supporting or changing the human activity of some organisation (Beynon-Davies 2002).

The functionality of the e-Consultation system as described above is intended to support a key human activity system of government - the consultation process. Consultation as a process demands a consulting population. We might argue that there are at least three classes of consultee to which a consultation process might be directed:

- <u>Partner Organisations</u>. In terms of a regional Assembly such as the NAfW this would constitute Assembly Sponsored Public Bodies (ASPBs) such as the Welsh Development Agency and the Welsh Language board as well as organs of local government.
- <u>Non-partner Organisations</u>. Such consultees would include all public, voluntary and private sector organisations in Wales.
- <u>Individuals</u>. All the citizens of Wales.

The usability of the ICT systems discussed above has yet to be assessed and such assessment may prove difficult without a clear idea of the user. Currently the ICT tools appear to be primarily directed at consultation with NAfW partners. This is not surprising in that the tools have been designed through participation with representatives of ASPBs. There are a number of key issues involved in extending this to non-partner organisations and citizenry. It remains to be seen whether such a generic system and process is effective in the sense that is it feasible to design one electronic consultation system for all classes of user.

The most difficult questions relate to utility concerns. Key efficiency and effectiveness gains are possible from e-Consultation in terms of the NAfW itself and established partners in the following ways:

- the turnaround time for policy formulation and consultation can be radically reduced.
- the content management of policy information becomes more efficient.
- the duplication of contacts information across NAfW divisions can be radically reduced.

In terms of effectiveness, key gains are possible in ways which include:

- NAfW officers with little experience of policy formulation and consultation may be guided through this process by the e-consultation system.
- more potential partners and citizens can be engaged with the government institution in consultation.
- more comprehensive feedback can be provided to each of the respondees to a consultation.
- a clear audit trail of consultation can be established, providing evidence in support of policy.

However, there is little empirical information to judge the effectiveness of such technological vehicles for improving communication and participation on the part of the citizen population.

The potential for ICT to improve external democratic processes is limited by a number of major forces of social exclusion present in Western societies. Particular sectors of society may be excluded economically, socially and politically from effective communication and participation in democracy (Tapscott, 1998). On the economic front the cost of ICT equipment and maintaining a connection to the Internet may prove prohibitive for many disadvantaged groups. Socially, low levels of e-literacy may exclude certain sectors from participation. Finally, politically government institutions may wish to impose levels of political/state control of the network infrastructure that prohibits certain opinions from being aired.

Issues surrounding extending social inclusion are high on the political agenda in Westminster, the European Union (European_Commission 2001) and the devolved legislatures in Wales, Scotland and Northern Ireland. A key feature of social exclusion in the UK is exclusion of marginalized groups from the decision-making process at local, regional and national level. This is characterised by low turnout at local and national elections and a lack of influence in the policy-making process. Politicians believe that the use of ICT, particularly Internet-based ICT can have a positive impact on reversing this trend (Hansard_Society 2002).

Observers have seen the development of a new 'techno-optimism' surrounding the use of ICT to combat social exclusion (Van Winden 2001). However, the idea that the Internet and ICT in general will lead to direct involvement of the entire populace in political debate has been questioned by many academics in recent years. Norris (Norris 2000) compares the speculation surrounding the impact of the Internet on democracy with similar ideas that emerged through the development of other mass media and communication technologies

such as radio and television. Norris points to two conflicting theories - Mobilization and Reinforcement – that help focus the debate surrounding e-democracy and social exclusion. This accords with Porebski's positive and negative face of e-Democracy (Porebski 2002).

Mobilization theory is the positive face of e-democracy. It argues that developments such as electronic bulletin boards, community web sites, low information costs and low cost Internet access will lead to new forms of direct democracy. Pal (Pal 1998), for instance, suggests that '..ICT dramatically lowers the barriers to entry into the political market place. Mobilisation is in principle easier because large numbers of people can be contacted and politically aroused through electronic means'.

In contrast, reinforcement theory is the negative face of e-democracy. Mobilisation theory argues that there is little empirical evidence to judge the effectiveness of such ICT vehicles for improving communication and participation on the part of the citizen population (Tapscott 1998). Concern has been expressed that the use of e-democracy may be heavily skewed towards certain sectors of society. Rather than enabling social inclusion, the Internet and associated ICT will simply reinforce the existing patterns of social inequality and political participation (Norris 2000).

Reinforcement theory suggests that major parts of the already disadvantaged sectors of Welsh society may be further disenfranchised through the use of such technologies. An emerging so-called digital divide may exacerbate rather than improve contemporary processes of social exclusion (Byrne 1999).

In a country such as Wales with varying skill levels and concentrations of wealth and poverty in a largely rural setting, there is the potential for further excluding social groups through the use of ICT in the democratic process. For example, recent figures from MORI show that in the UK 39% of citizens have access to the Internet, in Wales the figure is closer to 29% (Mori, 2002).

The relationship between access devices and channels and interactions between government and citizen is therefore crucial to this debate. Pilots are in place investigating the role of such access mechanisms as interactive digital TV for central and local government services. Hence the importance of providing more public access channels from within the community such as public libraries, schools and business ICT centres. However, there appears to be little research currently on perceptions to and take-up of ICT in such public access points. Early suggestions seem to indicate that the impact on the most socially and economically deprived groups is likely to be small in terms of access provided from traditional venues such as schools and libraries.

There is of course the added dimension of bi-lingualism in Wales and the position of the Welsh-speaking minority. To attempt to meet the needs of this sector, most, but not all e-consultation is offered by regional and local government through the medium of Welsh. However, there is little information as to the degree to which this minority utilise e-consultation. There is also little guidance as to appropriate ways of designing e-consultation vehicles for a bi-lingual audience.

7. Conclusion

The need to increase the transparency of policy making and to increase the involvement of the public in the formulation of government strategy are crucial components of the drive to increase the speed of the policy cycle and to be more interactive and inclusive of civil society in the policy formulation process. These are some of the main aims of modernizing government in the UK (Martin 2002).

In this paper we have considered the experience of electronic consultation at the NAfW. The future of e-consultation in the UK generally and in Wales in particular is difficult to forecast at this early stage. What is promising is the intention of the NAfW to re-engineer the process of policy consultation in Wales. This involves developing various electronic tools to support future consultation. Clearly, this has numerous potential benefits for the NAfW and its established partners such as creating consistency throughout the divisions and the agencies of the NAfW in the way that they utilise e-consultation.

What is less clear is the impact that the electronic enablement of the policy process will have on the relationship between government and citizen. For example, whilst there has been a substantial amount of theoretical debate, there is comparatively little empirical research on the linkage between social exclusion and e-Democracy. We have the unique chance to study qualitatively and longitudinally this linkage within a region of the UK that contains some of the most disadvantaged. Hence, we would expect our results to contribute not only to debate over effective ways of managing devolved governance but also to inform national and international debates over the relevance of e-Democracy in general and e-Consultation in particular.

Acknowledgements

Our thanks to the NAfW and particularly the ICT Strategy and Strategic Policy Units for supplying information used in this paper. The opinions expressed are entirely those of the authors.

References

- Beynon-Davies, P. (2002). Information Systems: an introduction to informatics in organisations. Houndmills, Basingstoke, Palgrave.
- Byrne, D. (1999). Social Exclusion. Buckingham, Open University Press.
- Davies, P. (2002). <u>Evidence-Based Policy</u>. Better Policy Event, National Assembly for Wales.
- European_Commission (2001). E-Inclusion The Information Society's potential for social inclusion in Europe, Commission Staff Working Document SEC(2001)1428.
- Hansard_Society (2002). Technology: Enhancing Representative Democracy in the UK? London, Hansard Society.
- Hill, K. A. and J. E. Hughes (1998). CyberPolitics: citizen activism in the age of the internet. Oxford, Rowman and Littlefield.
- Jones, B., A. Gray, D. Kavanagh, M. Moran, P. Norton and A. Seldon (2000). Politics UK. Cambridge, Cambridge University Press.
- Martin, S. (2002). The 'Modernisation' of UK Local Government. <u>Public Management</u> <u>Review</u> 4(3).
- Norris, P. (2000). A Virtuous Circle: Political communications in post-industrial democracies. Cambridge, Cambridge University Press.
- Pal, L. A. (1998). A Thousand Points of Darkness: Mobilization and the case of Communication Decency Act. <u>Digital Democracy</u>. <u>Policy and Politics in the Wired</u> <u>World</u>. C. Alexander and L. A. Pal. Oxford, Oxford University Press.

- Porebski, L. (2002). <u>Three Faces of Electronic Democracy</u>. European Conference on Information Systems, Gdansk, Poland.
- Tapscott, D. (1998). Growing up Digital: the rise of the net generation. London, Mcgraw-Hill.
- Taylor, J. A. and E. Burt (2001). Not-for-Profits in the Democratic Polity. <u>Communications</u> of the ACM 44(1): 58-62.
- UK_Online (2002). In the Service of Democracy: a consultation paper on a policy for electronic democracy, HM Government.
- Van Winden, W. (2001). The end of social exclusion? On Information Technology policy as a key to social indicators in large European cities. <u>Regional Studies</u> 35(9): 861-877.
- Mori. 2002. www.webactivemagazine.co.uk/News/1116641