

Introduction: Divided opinions over the digital divide

Denise Meredyth, Scott Ewing and Julian Thomas

In public debate and academic scholarship, opinion is divided over two connected issues: What are the consequences of 'information poverty' for social cohesion, security and civil peace (Norris 2001, Bowie OECD 2000)? Can new technologies be used to open up government, increase civic participation and rebuild community? While some cultural and media studies scholars continue to celebrate the democratising potential of the Internet, and economic liberals highlight the challenge of relatively unregulated new media, social scientists and policy agencies have pointed to the uneven social, cultural and geographical diffusion of computers, and the potential of technology use to amplify inequalities (DiMaggio and Hargittai 2001), or to fragment political culture (Castells 1996, Giddens and Hutton 2000, Sunstein 2001).

This special issue of *Southern Review* explores these questions. Here we review the main preoccupations in the current debate, focusing on the question of information poverty, its conceptualisation by governments and others, and a variety of strategies devised to address it. In doing so, we highlight the need for further research on current and historical patterns of adaptation and improvisation between technology, government and democratic political rationality.

Digital divides

Over the past decade, regional and national governments have troubled themselves, from time to time, about emerging patterns of information poverty. There has been particular focus on the link between employability and computer access, on the advantages enjoyed by those able to use online information, and on the threat of intergenerational social and economic marginalisation amongst low-income communities (Bowie 2000, US Dept of Commerce 1995, 1998, UK DTI 2000). Information poverty threatens both prosperity and security. The question is what governments can do to meet and anticipate problems that arise from rapidly changing patterns of technology use and consumer choice.

Governments of all political persuasions face the problem of how to intervene in the manner and extent to which people choose to use new communications technologies. In an era of declining public spending, they are increasingly unlikely to favour universal and open-ended remedies for the digital divide, such as setting up technology centres or subsidizing access to Internet connections. In both developed and developing nations there is a shift towards a policy emphasis on social partnership based solutions. The model is one in which communities rig up shared technological resources, sharing skills and building resources, with the help of volunteers, not for profit agencies, philanthropists, local businesses, schools and universities -- with the support of seed funding from government, where required (see Compaigne 2001).

Instances of this approach include the ‘wired community’ experiments emerging in Australia, Europe and North America (e.g. Cohill and Kavanagh 2000, Smith and Kollock 1999). Such schemes aim to use communication technologies within neighbourhood renewal plans to restock social capital and reduce social exclusion (Ewing et al 2002, Gurstein 2000, Cawood 2000). Recent initiatives include the UK education department’s ‘Wired-up Communities’ scheme, which involves using seed funding to encourage identified disadvantaged communities to enter into partnerships with technology companies; the result is seven regional wired community experiments, using a combination of set-top boxes, satellite and broadband to connect homes to the Internet. The aim of the funder is to open up educational and vocational opportunities, build participation and foster social capital (Devins et al. 2003). Equivalent schemes in the US include the ‘Creating Community Connections’ (C3) project, which MIT researchers are running with residents of a local housing development. Again, access to the Internet in the home and to community networks is seen as a means to enable communities to build their own skills and resources, rather than rely on welfare (Pinkett 2002).

Improvisations of this kind offer a policy alternative (or supplement) to an open-ended commitment to subsidise community technology centres or Internet kiosks. They are also attractively consistent with a communitarian emphasis on participation and on the generation of social capital, on building self-help and forming commonalities of interest within socially excluded populations (Wilcox and Pearly 2002, Perri 6 2001 p. 22; cf. Wellman et al 2001).

It is easy to overestimate the likely social and political impact of such schemes. Commentators continue to predict a technology-driven expansion of participatory democracy, as citizens overcome their apathy, demand transparency in government and transcend place-based interest groupings to form global civic networks (Fitzpatrick 2000, Hallawell 2001, Nye and Kamarck 1998). Others warn that, as consumers make more selective use of online news, education and communication services, the common culture on which democracy depends will disappear; people will be able to protect themselves from dissenting opinion, while enjoying like-minded exchanges (Sunstein 2001; but see Hunter 2002). In part, the predictions depend on how robust we take liberal democratic political culture to be. Like old technologies, the new ones are liable to give public platforms to the more articulate, educated and well-connected – and to the ignorant and opinionated (Applbaum 1998). They may open up new channels to discussion, information and education. They are unlikely, however, to solve endemic problems in democratic and liberal political thought, by producing an authentic community voice.

Liberal machines?

As the debate on information poverty spreads beyond the developed economies, it insistently replays the preoccupations of liberal and democratic political thought. Discussion focuses on the figures of the choice-making rational individual and the self-governing community, on freedom and on equality (see e.g. Schofield 2002, Marinetto 2003). Computer networks are expected to either emancipate political subjects (Hallawell 2001; Nye 1998), or to impose governmental norms (Fitzpatrick 2000). A plethora of new rights claims have emerged in response: the ‘right to information’ (Loader 1998), ‘virtual rights’ (Fitzpatrick 2000) and ‘digital rights’ (Perri 6 2001). It is still unclear how these

claims will be asserted or recognised and how far the responsibility and scope of government can extend.

Chadwick (2001) offers a typology of three different rationales for governmental efforts to bridge the digital divide and put citizens online. These three models are offered in combination and sometimes in conflict with one another. The managerial model emphasises 'efficient' delivery of government information to citizens and other groups of 'users'; the defining logic is one about the flow and control of information. The consultative model stresses direct and unmediated contact between citizen and state, through online referenda, 'e-voting', opinion polling and 'electronic town meetings'; the problem is to ensure that all citizens have access to technology. A third model, usually expected to transcend and replace the others, is more participatory. Getting all citizens online will create spontaneous interaction within cyber-space. Civil society will be mediated electronically; the role of the state will be limited to ensuring access and protecting free speech and rights of expression. Conflict between the rationales arises when it becomes clear that the goal of enhancing opportunities for civic participation may not always coincide with providing the most economical online service. Furthermore, despite the imperative to consult, citizens' needs are not always clear and networked information systems are not easy for the non-technically trained to understand.

There are also significant technical challenges involved in setting electronic services up. Whole of government integration means linking not only the services provided by agencies but also their infrastructure, financial management and budget processes. Effective use of portals requires a new architectural framework and a coherent investment strategy. Current financial budgeting systems are not designed for these kinds of initiatives. Skilled personnel are scarce, cost savings from providing services online are uncertain and the costs and benefits for agencies are uneven, hard to track and difficult to anticipate. There has been only limited action on administrative reform designed to cut red tape and break down the 'silos' of government departments; central co-ordination and planning is often lacking (NSW Auditor General 2001).

It is important not to be swept away by the hyperbole about radical social and political transformations wrought by technology. Instead, we can begin to see current political aspirations and expectations as part of a longer-term pattern of political experimentation and technical adaptation. The dilemmas associated with information poverty, opportunity, access and the digital divide are not new. They are deeply enmeshed in long-standing liberal governmental problems of how to achieve security and prosperity, while policing the boundaries of private interest and public good.

Historically, the art of liberal government has involved the adaptation of technologies to shape citizens' conduct, habits and aspirations. State control of the economy was seen as both impossible and counter-productive. The aims of government were better achieved by allowing the pursuit of private interests, regulating standards and agreements and devolving responsibilities. Strategies were devised to enable people to govern themselves; the expanding infrastructure of communication and information technology was indispensable to these strategies (Rose, 1999, Barry et al 1996). Governments have for a long time shaped new technologies through their financial resources and policy objectives, adapting emerging information and communication technologies to meet diverse military, economic and social ends. Aims such as improving public access to information,

standardising administrative systems and re-orienting services around the needs of citizens are reformist aspirations with long histories.

From this perspective, we can see today's discourse of information policy as part of a long-running political and intellectual process of adapting and appropriating technology (cf Hård and Jamison 1998). Sawhney has shown how metaphors, images and analogies pervade public policy discourse concerning technology (Sawhney 1996). The prevailing image of information networks in current scholarship and policy has been de Sola Pool's notion of 'technologies of freedom' (Pool 1983); this image has been used to highlight the problem of how technologies may emancipate people from the antique constraints of governments, corporations and ideologies. A different formulation may be needed to understand the lineage of contemporary information policy and preoccupations with security and disadvantage. As new information technologies are modified and adapted to address the persistent problems of liberal government, it is possible to see public computer networks being reconstructed as 'liberal machines'. The notion of the 'liberal machine' refers to the ways in which technologies may become instruments for the continuing negotiation and regulation of limited freedoms – (the term might recall Turing's 'thinking machines' of the 1950s, and Nelson's 'literary machines' of the 1970s: see Thomas 2000). The point is that the machinery of liberal political rule has always been improvised and imperfect. Liberal political rule has involved the continual effort (and failure) of governments to manage areas outside the scope of direct intervention – to govern at a distance (Barry 2001, Rose 1999).

The negotiation and regulation of limited freedoms is a process common to regimes that are not themselves either liberal or democratic in orientation. Indeed it is now one of the common arts of governance. Given economic internationalization, it may not be possible for any government to be entirely outside the models of governance that are propounded by bodies such as the World Trade Organisation or the World Bank and that are central to the terms of international development aid and research. Whether in advanced or transitional economies, there is need for new research on the political, legal and civic implications of new social uses of technology. Regionally sensitive research is needed on the political rationalities and regulatory options shaping information policy, in order to place current fears and expectations in context. Scholarly debate has begun to shift from the question of the governability of the Internet to more nuanced studies of the manifold regulatory systems, both legal and technical, which seek to manage information networks in practice (for example Lessig, 1999). Electronic commerce has been the major focus, however. Comparatively little attention has been given to electronic government or to community networking initiatives. More work also needs to be done on the relations between old and new media systems, and how they are connected to old and new political cultures (see Sunstein, 2001, cf. Owen, 1999).

Current innovations in the social use of technology, such as electronic government, exemplify both the scale and the limits of modern forms of governance. In giving people more information about government processes, technology may enable them to govern and regulate themselves more effectively, by equipping them to pursue their private interests and civic concerns within government-fostered but self-sustaining markets, civil associations and communities (Burrows et al 2000). Such innovations are expected to improve the endemically faulty and constantly repaired machinery of liberal democratic governance. They will be used as part of the imperative – and the 'productive failure' --

to predict, to track and to intervene in social and economic dynamics that lie beyond the immediate scope of state action (Rose 1999). We are seeing a reciprocal pattern by which government seeks to 'retool' communities, while government itself is re-engineered through the unexpected social uses and adaptations of technology. The results are unpredictable; those researching these issues will have much to keep them occupied, as developments unfold.

There are a number of related conceptual and empirical problems on which research is needed, in both developed and transitional economies. What are the options for the regulation of information, education and media systems; to what extent is the protection of cultural heritage, values and 'common knowledge' feasible, in the context of technological change, marketisation and convergence? To what extent can providers meet expectations of transparency, accountability, consultation and participation? How are social and cultural agendas best incorporated into information policy?

These are some of the themes pursued in this issue of *Southern Review*. The emphasis here is not on the grand statements of national information policy that have received so much attention in the past. Instead it is on practical, localized, and in many ways experimental responses to these problems. David Burchell's paper asks what we should expect from information policy. The historical lessons of the impact of print, he argues, should teach us more moderate expectations of the egalitarian potential of new technologies. Instead of searching for the new democratic public sphere, we should be paying attention to the creation of 'little publics', formed as people seek and find information to support diverse interests.

Subsequent papers take up different aspects of this descriptive task. Like Burchell, and many others, Deborah West argues that debate on information poverty is no longer about universalising access to technology; it is about how, where and why people use new technologies to seek information or communicate with others. She makes the argument using a case study of older people and their technology uses. She finds that even amongst a group for whom the cost of computer use and connectivity is not a problem, there are other significant barriers that prevent older people from making full use of online information and communication resources. The policy problem is whether and how to alter this pattern of confidence, choice and preference. In another localised study, Gerard Goggin examines the role of community networking as a new force in telecommunications service delivery in small rural towns. He argues that despite well placed optimism about the capacity of rural communities to determine their communications future, outcomes will depend on their access to adequate finance, expertise, and infrastructure. Distance can pose formidable technical and logistical challenges, as John Cokley shows in his description of an innovative network designed to deliver news and information to isolated researchers in Antarctica. Through a survey of these researchers he explores how this group makes use of the variety of sources of news and information available to them, what they miss from their normal regime of current affairs and what they value most in online sources of news and information. He finds that despite the advent of sophisticated filtering programs, users of online news and information services understand and value the importance of human mediation in selection and editing of content.

Each of these papers takes us beyond simple arguments about computer access and connectivity, focusing instead on local studies of technology use and adaptation. The

subsequent papers raise, in different ways, the question of how to understand the relationship between information, poverty, community and government. Grace Roldan's paper offers a study of community technology and local administration. Tracing the creation of local networks in the barangays of the Philippines, she examines the difficulties of implementing ICT initiatives in a transitional economy where infrastructure is poorly developed and unevenly distributed. The uncertain outcomes of such projects and their apparently tangential relationship to 'traditional' policy concerns such as poverty alleviation can make it difficult to build local commitment. This paper highlights the balancing act facing governments, as they seek to improve make organisations more efficient in administrative terms, while promoting the participation and involvement of citizens. Andrew Turk takes up comparable questions about the relationship between government, technology and local politics, in a study of how an indigenous community in the Pilbara region of Western Australia has sought to use government grants to develop a telecentre and associated infrastructure. As Turk shows, localised approaches to the digital divide can turn into a contest *between* disadvantaged groups for scarce resources. In different ways, both Roldan and Turk offer unromantic assessments of the challenges of community-based solutions.

This theme is pursued, on a more optimistic note, in the two papers that follow. Partha Pratim Sarker makes a strong case for finding community-based technological remedies for poverty, using a variety of current South Asian case studies that highlight the extent to which development strategies have come to focus on skill development, information-seeking and technology use. While accepting that new technologies cannot directly substitute for more traditional poverty reduction methods, Sarker argues that they can help to build skills and promote prosperity. Bringing the argument home, the final paper presents a final instance of an enthusiastic effort to combat information poverty, by building a wired community in an inner-Melbourne high rise public housing estate. Within the initiative, opinion is divided: there is no single conception of community or of the social impact of technology. In this case, as in others discussed in this issue, what is striking is the combination of ingenuity, energy and confusion on display.

No doubt the problem of information poverty will continue to be the focus for political aspiration and technical experimentation. We offer no effort to mediate between the divided opinions on the political potential of new technologies. This series of essays may help however to focus attention on local and concrete examples of the ways in which political reasoning and policy experimentation intersect with one another, in improvised efforts to bridge the digital divide.

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