

POLICY ENGAGEMENT AS RIGOUROUS AND RELEVANT INFORMATION SYSTEMS RESEARCH: THE CASE OF THE LSE IDENTITY PROJECT

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Abstract

In this paper we argue for information systems researchers to participate in policy engagement as a form of research that is both rigorous and relevant. We illustrate this argument by drawing on our own experiences of the policy engagement process, namely an ongoing analysis of the UK Government's proposals to introduce biometric identity cards. As a result of our experiences we reflect on the consequences of information systems researchers undertaking this style of research and make recommendations for the academic gatekeepers in information systems to consider and encourage research activities around policy engagement.

1 INTRODUCTION

Much information systems research is focussed on issues that are of particular relevance to business organisations and here information systems academics are making useful contributions to theory and practice. Thus, there is considerable literature on, for example, global sourcing, enterprise resource planning systems, knowledge management and electronic commerce and markets to cite some current examples. In addition, information systems researchers have also become more visible in less traditional organisational contexts, including government, not-for-profit organisations and socially excluded groups as well as developing countries. However, we believe that information systems researchers are not actively participating in an important area where we believe the insights and approaches of information systems research can make important contributions, namely the policy-making process.

Scarcely a day goes by without news coverage of an area where policies are being implemented with the use of technology, often problematically. At the time of writing¹, the search engine company Google has announced that it will anonymise its search engine data after 18–24 months (BBC News, 2007a), a secret memo has revealed concerns about automatic e-voting machines (Zetter, 2007) and US Presidential candidate Hillary Clinton has announced her plans for a 'privacy bill of rights' that would cover consumer's transactional data (Stirland, 2007). However, when we look to see if insights from information systems can be found in these areas we find instead others.

In each of these areas the leading academic voices are coming not from information systems academics but from computer scientists in the case of the anonymising search data, lawyers speaking about e-voting and political economists speaking about the privacy bill of rights. In each case, these academic contributions are useful and appropriate, but each issue could also draw on the contributions

of information systems researchers who are ideally placed for considering the relationship between technology and its wider social / organisational setting.

Our aim in this paper, therefore, is to argue the case for increased involvement of information systems researchers in the policy making process. That is, for insights from information systems research to be found alongside and complement contributions from computer science, law and political economy etc. Rather than study the effects of a policy once it is implemented, information systems researchers are well positioned to also engage in the policy making process. To make this case, we first review why policy engagement from information systems researchers is necessary for many of the policy problems that society faces and we review the limited, existing work that information systems researchers do in this area and discuss the different forms of engagement that can exist. We then present an example of our involvement with the policy process, namely the high profile report we were involved with on the UK's proposals to introduce biometric identity cards. We use this experience to draw out implications for information systems researchers and the field of information systems more generally.

2 THE NEED FOR POLICY ENGAGEMENT

According to one of the key readings within the literature on policy-making and the policy process, academic engagement with the policy process

contributes to public deliberation through criticism, advocacy and education. Good policy analysis is more than data analysis or a modelling exercise; it also provides standards of argument and an intellectual structure for public discourse. Even when its conclusions are not accepted, its categories and language, its criticism of traditional approaches, and its advocacy of new ideas affect—even condition—the policy debate (Majone, 1989 p. 7).

In a similar manner, Torgerson (1986) describes policy analysis as “those activities aimed at developing knowledge relevant to the formulation and implementation of public policy” (p. 33). At this time, when almost all areas of government and policy involve technology in some way, this knowledge relevant for the formulation and implementation of public policy should include an understanding of technology and its relation to society more generally.

In every case, the systems that are being proposed exist not as isolated technical systems, whose inputs and outputs can be formally specified in engineering terms, but rather need to operate in complex, messy environments where they interact with users who are best understood as social actors (Lamb & Kling, 2003). In this context, Tim Berners-Lee has called for the creation of a new web-science research institute which would “attract researchers from a range of disciplines to study it as a social as well as technological phenomenon” (BBC News, 2006b). On other occasions, the case for the consideration of the broader social context is not made so clearly; shortly before Berners-Lee made his call for consideration of the social side of technology, Google CEO Eric Schmidt called for “techies to teach governments” and help them understand the internet’s role in society (Broache, 2006).

The need for an understanding of information systems that goes beyond purely technological issues is particularly significant in the area of government IT for which the UK government has a bad record of failures and overspends (Dunleavy et al., 2006).

There are many explanations for the state of government IT, especially in the UK (Craig & Brooks, 2006; Dunleavy et al., 2006; LSE Identity Project, 2005 ch. 15) but perhaps the simplest explanation was given by former Conservative MP Chris Patten, who said “Many politicians don’t understand the technology issues that could affect government IT schemes” instead, he suggested, “they rely on advisors for information on how to implement their broad intentions. You have to hope they’re well advised” (Espinier, 2006), an argument that has been made before (Sarson, 2006; BBC News, 2006a).

We believe that information systems researchers can and should be amongst those providing this “good advice” to governments. That is, the argument of our paper is driven by three related factors. First, following Majone and Torgerson there is a clear need for academics to engage in policy analysis

and condition the policy debate by introducing new categories and language, critiques of traditional approaches and advocacy of new ideas. Second, many of these policy areas in government are driven by technological measures and yet government seems particularly unable to appreciate the complexities of technological systems and third, although an understanding of the technological features of these systems is important, a broader consideration of the technology in its organisational context is particularly important. We therefore believe that there is a strong case for information systems researchers to step up to this challenge.

It is too simplistic, however, to suggest that information systems researchers do no policy engagement work at present as there are good examples of researchers informing the debate in areas such as addressing the failures in development policies (e.g. Lewis & Madon, 2004; Krishna & Walsham, 2005), the ideal mechanisms for resolving the digital divide (e.g. Kvasny & Keil, 2002), how we can adapt intellectual property rules to the modern age (e.g. Spitz & Hunter, 2005), what we should do about creating international security standards (e.g. Backhouse et al., 2006) and how we might secure modern societies in the face of global threats (e.g. Hosein & Whitley, 2002; Whitley & Hosein, 2005). However, in many of these cases of policy engagement, the information systems contributions are overshadowed by contributions from other fields. Political economy, in the case of the digital divide (Norris, 2001), law in the case of intellectual property (e.g. Lessig, 2001), sociology and international relations in the case of global threats (e.g. Council on foreign relations, 2006), development economics in the case of developing countries (e.g. Wade, 2004) etc.

Part of the problem, we suggest, is because our academic outlets (journals, conference, promotion committees, research assessment exercises etc.) don't always know how to recognise and reward policy engagement activities, unless they are transformed into traditional academic publications.

3 AN EXAMPLE: THE LSE IDENTITY PROJECT

Policy engagement can take a variety of forms. At one level, academics might be invited to undertake specific research that would explicitly form the basis for future policy deliberations. For example, the economist Sir Nicholas Stern has recently completed a study for the UK government on the likely economic impacts of global warming. The resulting report (Stern, 2006) is likely to inform the basis for future 'green' policies for both government and opposition parties.

In other cases, academics might be invited to act as specialist advisors to parliamentary committees or might be invited to participate in policy discussions and workshops. Academics might contribute evidence to parliamentary committees and might provide cross-party briefings explaining the complexities of particular legislative issues.

Sometimes, however, academic contributions might exist 'outside' the formal government consultation and deliberation process. The LSE Identity Project is one such 'outside' intervention.

In 2002 the UK Government announced its intentions to implement a national identity card. It was hoped that the existing policy-making processes would have collected and made use of academic analyses. However, when it became clear that this was not arising a group of researchers at the LSE decided to embark on an independent process to engage with and inform policy deliberation in this area. Full details of the motivation for our study, and the methods used, as well as reflections on our role in this process are beyond the scope of this paper. Some of the material has been published elsewhere (Whitley et al., 2007) and other reports etc. are available on the Identity Project website (LSE Identity Project, 2007).

In this paper we describe our involvement in the LSE Identity Project, which provided a number of policy analyses including one detailed, 300+ page report on the likely risks and implications of the government's proposals (for other outside analyses of the Identity Cards Scheme see Wadham et al., 2006; Beynon-Davies, 2006).

Our main report and subsequent briefings reviewed the proposed scheme in terms of the international environment and obligations, identity fraud, policing, race, discrimination and immigration, the environment of public trust, the legal environment, biometric technologies, the security and safety of

the proposed national identity register, government IT, the likely costs of the government's proposals and presented an alternative blueprint for the scheme. The output was highly influential and was widely cited in Parliament. Project members were frequently called upon by the media to provide comments and explanations of the implications of the scheme. In part because our cost estimates were between two and four times higher than the government had estimated, the government launched a high profile, *ad hominem* attack on the quality of our "so-called" research. However, rather than reducing the influence of our detailed work, these attacks maintained our profile and ensured that the debate about identity cards has remained a leading news story, even all these months later, with continuing references to independent experts who believe that the costs are higher than the government still claims (e.g. Hinsliff, 2007).

In the remainder of this section we demonstrate how the research produced by the LSE identity project has influenced the policy debate. We distinguish between direct influences, where specific reference is made to analyses undertaken and presented by the project, and indirect influence where we observe changes in the policy debate that directly reflects issues that we (amongst others) raised in our work, but where the attribution of influence is less explicit.

3.1 Direct influences on the policy process

One of the clearest examples of the role that the Identity Project played is the number of mentions our work received in Parliament; with over 200 explicit mentions of LSE reports during the 56 days of Parliamentary debate. When our research was drawn on by Parliamentarians opposed to the Bill, our work was referred to favourably, as in this extract from a speech by Conservative MP Edward Garnier during the House of Commons Committee stage:

My hon[orable] Friend the Member for Newark has, quite properly, referred on a number of occasions to the valuable work done by the team at the London School of Economics. They have spent some time looking carefully at the subject and have reached a number of conclusions. I make no claims of originality; I am relying heavily on the findings of the LSE report. [Hansard 12 July 2005 Column 229]

When our research was referred to by the government, a rather different tone is found. For example, this statement was made by Baroness Scotland, in the House of Lords

There seems to be a basic error. We were surprised to discover, for example, that in the body of the report undertaken by the LSE there was no reference to one of the major reports on biometrics and the way in which that was dealt with in the United States. It is unusual for such a gap not to have been addressed. That is surprising [Hansard 19 Dec 2005 Column 1564].

In terms of the question of costs of the scheme, our analysis and, in particular, events we organised, led to a clearer understanding of the way that the Home Office was presenting its cost figures to Parliament (for more detail on this see Whitley et al., 2007). This led directly to an amendment to the Bill being proposed by the House of Lords which was overturned in the House of Commons. However, in so doing, the House of Commons insisted that the Government report back every six months on the likely costs of the Scheme and the first such report was issued on 9 October 2006 (Home Office, 2006a).

Our work has also influenced the public perceptions of the government's arguments for identity cards, as can be seen in this extract of a letter written to *The Times* in November 2006 after a columnist suggested that identity cards could help in the fight against terrorism:

Sir, Alice Miles says biometric ID cards could help to prevent terrorism (Comment, "We face a terrible threat—so storing my dull, private details is no big deal," Nov 8). However, the London School of Economics reports that: "Of the 25 countries that have been most adversely affected by terrorism since 1986, 80 per cent have national identity cards, one third of which incorporate biometrics". Identity cards clearly do not make countries safe from terrorists (Watson, 2006).

Perhaps the most humorous example of the direct effect our report had on the Parliamentary process is found during one of the more contentious debates in the House of Commons on 13 February 2006 (in

fact on the amendments on costs proposed by the House of Lords). The Government's front benches jeered on the first mention of the LSE (this was recorded in Hansard, the official record of Parliament, as an 'interruption').

3.2 Indirect influences on the policy process

One of the stated purposes of the identity cards is to help address problems of identity fraud. However, our analysis of the government's figures for the likely level of identity fraud in the UK has meant that the media rarely reports such figures uncritically. Indeed, when the government first announced that identity fraud was now costing the UK economy £1.7 billion per year, up from £1.3 billion, a number of media reporters discovered that there were many problems with these revised figures (McCue, 2006).

This sceptical tone continues. For example, a recent piece in the financial pages of a daily newspaper states

You can't open a newspaper these days without being confronted with apocalyptic warnings about identity theft. It is apparently Britain's fastest-growing crime, costs the UK economy an estimated £1.7bn a year and is an invisible menace that can cause damage for months before you realise it has happened to you ... The latest evidence suggests that [evidence of the scale of the problem] is far from clear cut. This week saw the publication of official figures for UK credit and debit card fraud. These include data on levels of card identity theft—which includes crooks using a stolen or fake ID to apply for a card, or raiding dustbins to obtain personal information such as bank details to take over someone's account and run up huge debts. The figures reveal that, rather than shooting up, losses from credit and debit card ID theft fell by 7% during the six months to June 30 this year—from £16.1m to £15m. Losses from lost and stolen cards also fell, as did those for fraud committed with cards stolen before the genuine cardholders receive them (Jones, 2006).

In March 2007, updated figures for the UK suggested that there was a further 3% drop in the amount of money lost to card fraud in 2006 (BBC News, 2007b).

Another frequent claim that was made to support identity cards was that there were international obligations requiring the UK government to introduce biometric passports and that hence it was only a small step from what we had to do to satisfy these obligations to introducing biometric identity cards. Again, our research pointed out that these international obligations were either not binding on the UK or did not require anything like the level of biometric data collection that the Identity Cards Scheme was proposing.

As a result of our analysis, it is noticeable how the language about international obligations has changed. For example in 2006 the ten-year business plan of the agency responsible for identity cards and passports states, under the heading "Compliance with international standards" that bodies like the ICAO alongside individual countries like the United States set policy that affects UK passport holders that may require changes to identity documents. These drivers for change include:

US visa waiver scheme requirements for passports to contain a facial biometric from October 2006

EU mandate of both facial biometrics (August 2008) and fingerprints (2009) for Member States' passports within the Schengen area (UKIPS, 2006a p. 23)

The document, however, does not highlight the fact that the UK is not actually part of the Schengen area and is not subject to these requirements nor that the requirements for a facial biometric does not imply the recording of 10 fingerprints and two iris scans proposed by the Identity Cards Scheme. Similarly, in a recent newspaper article by the Prime Minister on the need for identity cards, the claims of international obligations became quite nuanced:

More than 50 countries are developing biometric passports. France, Italy and Spain plan to make their ID cards biometric. Visitors to the United States now digitally record their fingerprint, and new UK passports from last month must carry a facial biometric (Blair, 2006).

Blair then continues by repeating the claim that, nevertheless, some of the high figures of the costs of the scheme “include the costs of biometric passports” in the total, thus artificially inflating them.

This is unfair and inaccurate. We will have no choice but to have a biometric passport (Blair, 2006)

His piece was also nuanced about other likely benefits of the identity cards scheme, arguing that he was

not claiming ID cards, and the national identity database that will make them effective, are a complete solution to these complex problems [of illegal immigration, crime, terrorism and identity fraud] (Blair, 2006).

This suggests that leading politicians and civil servants have learned that they can no longer make the simplistic arguments about the issue and that our analysis has affected the “standards of argument” used and provided “an intellectual structure for public discourse”. Indeed, the 2007 business plan for the Identity and Passport Service states that “the current UK passport product meets or exceeds the current standards set for international travel documents” (UKIPS, 2007).

4 IMPLICATIONS FOR INFORMATION SYSTEMS RESEARCH AND RESEARCHERS

Our policy engagement activities are rather different to the research undertaken by many IS researchers. Its timely nature and widespread coverage requires specific reflections for IS academics. In this section we discuss some of these issues that arise from our experiences in policy engagement: the scope of IS research, questions of rigour and relevance, the extent to which policy analysis can be predictive, our involvement in the scheme we were studying and some of the dangers that IS academics may face in policy engagement.

4.1 The scope of information systems

Galliers and Whitley (2007) argue that there are distinct differences between information systems research in the European tradition and North American research. One area where this can be seen is in the unit of analysis. Much of the mainstream information systems research is very much focussed on individuals, their perceptions of technology and their intended use of it, so much so that a recent piece by Agarwal and Lucas (2005) called for a significant portion of research to be on “macro studies of the impact of information technology” (p. 382). Their notion of macro, however, is limited to organizations and industries.

While this is to be welcomed, our argument for a greater involvement in the policy-making process suggests that the recognised boundaries of information systems research need not be restricted to the organization or industry but can include the nation and its government or even, as is the case of international agencies like the ICAO, international issues.

4.2 Rigour and relevance

One common theme in the meta-debates about information systems research is the apparent dichotomy between rigorous and relevant research (see, for example, Benbasat and Zmud (1999) and the various responses). This is typically characterised as differentiating between highly controlled, often experimental research, which may present results that are of limited direct applicability to practice, versus research that has direct relevance to practice but might be based on research methods that are not as rigorous. Often this is rephrased as a simple contrast between positivist and interpretivist research.

In terms of relevance, particularly during the latter stages of the debates, we issued a number of reports and briefings often on a weekly basis. For example, between 15 January 2006 and 3 March 2006, we published two reports, three parliamentary briefings, an op-ed piece for a national newspaper and a written submission to a Parliamentary Select Committee, see Table 1. This volume

of relevant output was required because during this time the proposals went through their Committee, Report and third reading stages in the House of Lords and the House of Commons began its consideration of Lords Amendments. For an explanation of how a Bill becomes Law see (House of Lords, 2005).

More generally, our involvement with the parliamentary debate was ongoing throughout the entire deliberations and we were frequently called upon by the press to comment on developments. Parliamentarians from all sides of the political spectrum were contacting us regularly asking for additional commentaries. We have also been approached directly by other governments on this matter, including a meeting with Australia's Attorney General to discuss their proposals for a national access card scheme (Australian Government, 2007), a scheme that has recently been put on hold because of many concerns about the impact of the scheme.

Date of publication	Publication
Sunday 15 January 2006	Second report: On research status report
Monday 23 January 2006	Briefing: Voluntary versus compulsory regimes
Friday 3 February 2006	Submission to Select Committee inquiry
Monday 6 February 2006	Briefing: Identity fraud
Monday 13 February 2006	Briefing: Nothing to hide
Friday 17 February 2006	Newspaper op-ed piece: Hang together—or we will hang separately
Friday 3 March 2006	Third report: Home Office cost assumptions

Table 1 Relevance in practice: Documents produced by the LSE Identity Project January–March 2006. All available at (LSE Identity Project, 2007)

In terms of rigour the government attempted, on a number of occasions, to dismiss the LSE Identity Project as flawed research. We frequently had to respond by highlighting the detailed, fully referenced research that underlay our findings. The very nature of our work and its high profile required rigour–by–design. Throughout the research and writing process, not only were we concerned with the possible responses from our reviewers (were we to ever publish our findings in academic outlets) we were also concerned with the reaction from our friends and 'enemies' and even the media if we made even small errors in judgement. In standard academic studies it is taken as a matter of faith that the researchers conducted their research with integrity; in the public sphere of media and political campaigns there is no such faith and we would have encountered an unforgiving set of forces if we failed to conduct our research with integrity. We often feared for our careers if we ever brought the name of our institution into disrepute.

In the end we happily accepted attacks when they came because we could sleep well at night knowing that we had done our work with due care and attention. We also enjoyed unprecedented support from the higher echelons of our institution. More interestingly, another test of rigour was that with every interaction and engagement we learned more about ontology, epistemology, methodology and the domain of politics and technology. This constant learning cycle prevented us from ever standing up and claiming authority over all other sources of knowledge, unlike our critics. If anything we understood that from seeing this process so up close it is increasingly difficult to know the causes of things (*rerum cognoscere causas*).

4.3 Predictability

One way in which the utility of any research can be evaluated is in terms of the predictions that the research makes. Our report warned that the government's proposals for identity cards were likely to be high cost and high risk. This prediction has been borne out in a high profile warning about potential failures with the scheme. On 9 July 2006, the main headline on the front of the broadsheet newspaper *The Sunday Times* announced that senior officials were claiming that ID cards are doomed

(The Sunday Times, 2006b). The story drew on a series of leaked emails between senior officials responsible for the scheme (The Sunday Times, 2006a).

For example, our reports had warned about the government's ability to deliver the scheme on cost and on time. We were particularly concerned by the ability of the ministry that was most heavily pushing the scheme, the Home Office (the internal and justice ministry) because of its poor history with technology projects and public trust. This was echoed in the leaked emails:

Also even if everything went perfectly (which it will not) it is very debatable (given performance of Govt ICT projects) whether whatever TNIR [The National Identity Register] turns out to be (and that is a worry in itself) can be procured, delivered, tested and rolled out in just over two years and whether the resources exist within Govt and industry to run two overlapping procurements. What benchmark in the Home Office do we have that suggests that this is even remotely feasible? I conclude that we are setting ourselves up to fail. (The Sunday Times, 2006a)

The business case for the identity cards scheme within government was also challenged in the leaked emails that warned of "the lack of clear benefits from which to demonstrate a return on investment and the concerns about the lack of requirement documentation" (The Sunday Times, 2006a). One would expect that if these other government departments were confident in the Home Office's ability to deliver the scheme successfully they would have no problem being compelled to integrate their own systems with the Identity Cards Scheme. Not mandating the use of the Identity Cards Scheme across government suggests major concerns with the project or within these other departments and goes against the stated government policy of providing joined-up government and it is now clear that no such policy has been achieved despite three and a half years trying to sell the benefits of the scheme to the rest of government. Indeed, UKIPS now sees its vision as being the "preferred provider" of identity services (UKIPS, 2007).

In December 2006, the Identity and Passport Service introduced its Strategic Action Plan that, essentially, redesigned and simplified the proposed Scheme in response to claims that the original plans were too high risk and high cost (UKIPS, 2006b).

4.4 Action research

Given our role in the ongoing academic analysis of the Identity Cards Scheme we have, as reflective individuals, spent some time considering the effects of our role on the research process (Alvesson & Skoldberg, 2000). Our involvement, however, cannot be accurately described as action research which is a process that depends on the social interaction between observers and those in their surroundings. The main contention of action research is that complex social processes can be studied best by *introducing changes* into these processes and observing the effects of these changes (Baskerville, 1999). During action research, as the researcher and the subjects interact, a shared meaning develops and in some ways the world-view of the researcher approaches that of the subjects (Mårtensson & Lee, 2004)

Although our work did have effects, we cannot be described as 'introducing changes', nor was the purpose to observe the effects of our interventions. In a similar manner, although we spoke extensively with the press about our work, we did not (and could not) create a media campaign on the issue. Thus, although we were involved as participatory observers, we did not determine the nature of the interventions and had even less control over their consequences. Finally, it was never our intent to introduce changes in the environment to in turn study their effects. The point of our action was simply to engage with the policymakers, experts and others to inform debate.

4.5 Dangers

Our report was very critical of the government's proposals and, as noted above, was subject to extensive critique by government. The then Home Secretary, Charles Clarke, went on the BBC to accuse us of 'spinning', and leaking material to the press for maximum exposure. Our figures, he claimed, were "simply mad," and we were "technologically incompetent". He was followed by other Ministers taking the same line. A lead researcher on the report was singled out and 'smeared' (in the

words of a leading tabloid newspaper) on the BBC's flagship Today Programme. The team's integrity was even questioned by the Prime Minister on the floor of the House of Commons. Sir Howard Davies, the Director of the LSE, with the backing of the School's Governors, felt it necessary to rebuke the Prime Minister and Home Secretary first in a letter to the Times newspaper, claiming that the government was attacking intellectual freedom (Davies, 2005), and then in a letter to the Prime Minister copied to the leaders of all major political parties (Davies, 2006), after the Prime Minister had alleged that "although the report was put out under the LSE's name, it was actually written by the leading campaigner against ID cards on the ground of civil liberties" and claiming that it was not "an entirely objective assessment" (Hansard 18 January 2006 Column 833). The attacks on the LSE work continue. A recent document, released in October 2006, still claims that the LSE identity project "was not as independent or accurate as was claimed by its authors" (Home Office, 2006b p. 15).

This would suggest that 'outsider' policy engagement of this type should, perhaps, only be contemplated if the university governing body is willing to stand publicly behind its academics, and to resist all forms of political pressure. We are lucky enough to work in an institution where we received such unwavering support, but are left wondering how many other like-minded universities are out there? What would have happened to us if our institution had not stood by us? Though some may disagree with our findings, few would doubt the importance of having conducted the research and presented the analyses as effectively as possible.

5 CONCLUSIONS

This paper has presented policy engagement as a form of information systems research that is both rigorous and relevant. By drawing on the experiences of the LSE identity project it has shown how information systems research can have a major impact on large scale government technology projects. The research provided new standards of argument and an intellectual structure for public discourse that has resulted in a fundamental change in the design of the scheme.

We therefore believe that policy engagement is an important area where many information systems academics should seek to make a contribution. This raises the question, however, of why policy engagement by information systems researchers is far less common than, for example, legal experts and computer scientists. We believe that, in part, this is because the traditional academic gatekeepers (Introna & Whittaker, 2004) in information systems have failed to recognise the potential of this style of research. We therefore call upon them to be open to this style of research, recognising that it operates beyond the traditional scope of the individual, organisation or industry and to help identify and reward the kinds of contributions that information systems researchers can and should be making in this field.

With information technology becoming increasingly central to many parts of government policies, and with politicians seemingly unable to make proper sense of the relationship between the technology, its organisational context and society more generally, we believe that there is a strong case for information systems researchers to address the challenge of engaging with policy in such areas.

6 REFERENCES

Agarwal, R. and Henry C. Lucas Jr. (2005) The information systems identity crisis: Focussing on high-visibility and high-impact research. *MIS Quarterly* 29 (3), 381-398.

Alvesson, M. and Skoldberg, K. (2000) *Reflexive Methodology: Interpretation and Research*. Sage, London.

Andersen, R. (2006) What can patients do? *The Guardian* 1 November 2006 Archived at <http://www.guardian.co.uk/medicine/story/0,,1936471,00.html>

Australian Government (2007) Office of Access Card Archived at <http://www.accesscard.gov.au/publications.html>

Backhouse, J., Silva, L. and Hsu, W. Y. (2006) Circuits of power in creating *de jure* standards: Shaping an international information systems security standard. *MIS Quarterly* 30 (5), 413-438.

Baskerville, R. (1999) Investigating Information Systems With Action Research *Communications of the AIS* Archived at <http://cais.isworld.org/articles/2-19/default.asp?View=pdf&x=40&y=11>

BBC News (2006a) How to legislate against hackers 13 March 2006 Archived at <http://news.bbc.co.uk/1/hi/technology/4799338.stm>

BBC News (2006b) Web inventor fears for the future 2 November 2006 Archived at <http://news.bbc.co.uk/1/hi/technology/6108578.stm>

BBC News (2007a) Privacy bodies back google step 15 March 2007 Archived at <http://news.bbc.co.uk/1/hi/technology/6453137.stm>

BBC News (2007b) Reduction in card fraud in 2006 14 March 2007 Archived at <http://news.bbc.co.uk/1/hi/business/6445409.stm>

Benbasat, I. and Zmud, R. W. (1999) Empirical research in information systems: The practice of relevance. *MIS Quarterly* 23 (1), 3-16.

Beynon-Davies, P. (2006) Personal identity management in the information polity: The case of the UK national identity card. *Information polity* 11 (1), 3-19.

Blair, T. (2006) We need ID cards to secure our borders and ease modern life *The Daily Telegraph* 6 November 2006 Archived at <http://www.telegraph.co.uk/opinion/main.jhtml?xml=/opinion/2006/11/06/do0601.xml>

Broache, A. (2006) Google CEO: Techies must educate governments *ZDNet* 17 October 2006 Archived at http://news.zdnet.com/2100-9588_22-6126938.html

Council on foreign relations (2006) Global threats Vol 85, No 5 Archived at <http://www.foreignaffairs.org/2006/5.html>

Craig, D. and Brooks, R. (2006) *Plundering the public sector: How New Labour are letting consultants run off with £70 billion of our money*. Constable, London.

Davies, H. (2005) Letter: LSE report on ID cards cost *The Times* 2 July 2005 Archived at <http://www.timesonline.co.uk/article/0,,59-1677135,00.html>

Davies, H. (2006) Letter to the Prime Minister January 20 Archived at http://identityproject.lse.ac.uk/davie_stobair.pdf

Deibert, R. (2006) SDA India Archived at http://www.sda-india.com/sda_india/psecom.id.102.site_layout.sdaindia.news.13226,p,0.html

Dunleavy, P., Margetts, H., Bastow, S. and Tinkler, J. (Eds.) (2006) *Digital Era Governance: IT corporations, the state and e-government*. Oxford University Press, Oxford.

Espiner, T. (2006) Chris Patten: Politicians have no grasp of technology *ZDNet* 26 October 2006 Archived at <http://news.zdnet.co.uk/security/0,1000000189,39284350,00.htm>

Forbes (2006) Electronic Voting Dispute Goes To Court 21 November 2006 Archived at http://www.forbes.com/security/2006/11/21/florida-voting-recount-tech-security-cx_ll_1121voting.html

Framingham, T. R. W. (2006) 'Vote-flipping' is real, but the cause is still unclear *Computer World* 23 November 2006 Archived at <http://computerworld.co.nz/news.nsf/news/EBCF9A63E6F95944CC257229000B8BB0>

Galliers, R. D. and Whitley, E. A. (2007) Vive les differences? Developing a profile of European Information Systems Research as a basis for international comparisons. *European Journal of Information Systems* 16 (1), Forthcoming.

Hinsliff, G. (2007) Blunkett is given job at identity card firm 25 March 2007 Archived at <http://observer.guardian.co.uk/politics/story/0,,2042271,00.html>

Home Office (2006a) First bi-annual report to Parliament on costs, as required by s37 of the Identity Cards Act Archived at <http://www.identitycards.gov.uk/downloads/costreport37.pdf>

Home Office (2006b) Response to Report of Science and Technology Select Committee Archived at <http://www.identitycards.gov.uk/downloads/govtResponse.pdf>

Hosein, I. and Whitley, E. A. (2002) The regulation of electronic commerce: learning from the UK's RIP act. *Journal of Strategic Information Systems* 11 (1), 31-58.

House of Lords (2005) Bills and how they become Law Archived at <http://www.parliament.uk/documents/upload/HofLBpBillsandhow.pdf>

IGF (2006) The internet governance forum Archived at www.intgovforum.org

Internet industry association (Australia) (2006) Proposed Copyright Laws: Risk Analysis for Teenagers, Families, Small Businesses and Industry 14 November 2006 Archived at http://www.iiaindustries.com/index.php?option=com_content&task=view&id=519&Itemid=32

Introna, L. D. and Whittaker, L. (2004) Truth, journals and politics: The case of MIS Quarterly. In *Information systems research: Relevant theory and informed practice* (Kaplan, B. and Duane P. Truex III and Wastell, D. and Wood-Harper, A. T. and Degross, J. I., Eds), pp 103-120, Kluwer, Boston.

Jones, R. (2006) Identity crisis? What identity crisis *The Guardian* 11 November 2006 Archived at <http://money.guardian.co.uk/insurance/story/0,,1944702,00.html>

Krishna, S. and Walsham, G. (2005) Implementing public information systems in developing countries: Learning from a success story. *Information technology for development* 11 (2), 123-140.

Kvasny, L. and Keil, M. (2002) The challenges of redressing the digital divide. *International Conference on Information Systems* Barcelona, 817-828.

Lamb, R. and Kling, R. (2003) Reconceptualizing users as social actors in information systems research. *MIS Quarterly* 27 (2), 197-235.

Leigh, D. and Evans, R. (2006) Warning over privacy of 50m patient files *The Guardian* 1 November 2006 Archived at <http://www.guardian.co.uk/frontpage/story/0,,1936404,00.html>

Lessig, L. (2001) *The future of ideas: The fate of the commons in a connected world*. Random House, New York.

Lewis, D. and Madon, S. (2004) Information systems and nongovernmental development organizations: Advocacy, organizational learning, and accountability. *The information society* 20 (2), 117- 126.

LSE Identity Project (2005) Main Report *London School of Economics and Political Science* 27 June 2005 Archived at <http://identityproject.lse.ac.uk/identityreport.pdf>

LSE Identity Project (2007) Web resources *London School of Economics and Political Science* Archived at <http://identityproject.lse.ac.uk/>

Majone, G. (1989) *Evidence, argument, and persuasion in the policy process*. Yale University Press, New Haven.

Mårtensson, P. and Lee, A. S. (2004) Dialogical action research at Omega Corporation. *MIS Quarterly* 28 (3), 507-536.

McCue, A. (2006) Government ID fraud claims - are they what they seem? Costs UK £1.7 bn a year? Figures 'not an exact science' ... *Silicon.com* 2 February 2006 Archived at <http://www.silicon.com/publicsector/0,3800010403,39156140,00.htm>

Moxley, T. (2006) Computer expert: Scrap all paperless voting machines 16 November 2006 Archived at <http://www.roanoke.com/news/roanoke/wb/wb-xp-91818>

Mueller, M. (2006) Intellectual property watch Archived at http://www.ip-watch.org/weblog/index.php?p=437&res=1440_ff&print=0

Norris, P. (2001) *Digital divide : civic engagement, information poverty, and the Internet worldwide*. Cambridge University Press, Cambridge.

Sarson, R. (2006) Techno world has MPs beat *The Guardian* 9 March 2006 Archived at <http://www.guardian.co.uk/idcards/story/0,,1726352,00.html>

Spitz, D. and Hunter, S. D. (2005) Contested codes: The social construction of Napster. *The information society* 21 (3), 169-180.

Stern, N. (2006) Stern Review on the economics of climate change Archived at http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm

Stirlane, S. L. (2007) Hillary: The privacy candidate? *Wired News* 24 January 2007 Archived at http://www.wired.com/news/technology/0,72549-0.html?tw=wn_politics_13

Sydney Morning Herald (2006) Copyright crimes and misdemeanours 21 November 2006 Archived at <http://blogs.smh.com.au/mashup/archives/008333.html>

The Sunday Times (2006a) Emails from Whitehall officials in charge of ID Cards *The Sunday Times* 9 July 2006 Archived at <http://www.timesonline.co.uk/article/0,,2087-2261631.html> Now also available officially from http://www.identitycards.gov.uk/downloads/foi/3905_URN_129.pdf

The Sunday Times (2006b) ID Cards doomed,say officials *The Sunday Times* 9 July 2006 Archived at <http://www.timesonline.co.uk/article/0,,2087-2262437.html>

Torgerson, D. (1986) Between knowledge and politics: Three faces of policy analysis. *Policy sciences* 19 (1), 33-59.

UKIPS (2006a) Identity and Passport Service: Corporate and Business plans 2006–2016 Archived at http://www.identitycards.gov.uk/downloads/IPS_Corporate_Plans06.pdf

UKIPS (2006b) Strategic Action Plan for the National Identity Scheme Archived at http://www.identitycards.gov.uk/downloads/Strategic_Action_Plan.pdf

UKIPS (2007) Identity and Passport Service: Business plan April 2007 Archived at http://www.passport.gov.uk/downloads/Business_Plan_April_2007.pdf

Wade, R. (2004) Is Globalization Reducing Poverty and Inequality? *World Development* 32 (4), 567-589.

Wadham, J., Gallagher, C. and Chrolavicius, N. (2006) *Blackstone's guide to the Identity Cards Act 2006*. Oxford University Press, Oxford.

Watson, A. (2006) ID cards will not help to counter terrorism *Letter to the Editor: The Times* Archived at <http://www.timesonline.co.uk/article/0,,59-2443939.html>

Whitley, E. A. and Hosein, I. (2005) Policy discourse and data retention: The technology politics of surveillance in the United Kingdom. *Telecommunications Policy* 29 (11), 857-874.

Whitley, E. A., Hosein, I. R., Angell, I. O. and Davies, S. (2007) Reflections on the academic policy analysis process and the UK Identity Cards Scheme. *The information society* 23 (1), 51-58.

Zetter, K. (2007) E-vote memo is a 'smoking gun' *Wired News* 22 March 2007 Archived at http://www.wired.com/news/technology/0,73048-0.html?tw=wn_politics_1

¹ To illustrate the ongoing nature of this issue, these are the examples we gave at the time of submission (November 2006). "The Internet Governance Forum has recently taken place in Athens, discussing issues like access, openness and security (IGF, 2006). In the same week, a UK newspaper warned of serious privacy and trust problems associated with the new 'spine' of health records in the UK National Health Service (Leigh & Evans, 2006). In the US, problems are being noted with electronic voting machines (Forbes, 2006) and intellectual property rules are raising political temperatures in Australia (Internet industry association (Australia), 2006). However, when we look to see if insights from information systems can be found in these areas we find instead lawyers, computer scientists and political economists.

In each of these areas the leading academic voices are coming not from information systems but from political economists in the case of the IGF (Mueller, 2006; Deibert, 2006), computer science in the case of the NHS (Andersen, 2006) and voting machines (Framingham, 2006; Moxley, 2006) and lawyers in intellectual property (Sydney Morning Herald, 2006).