



EVROPAEVM

*Democracy and the Internet:
new rules for new times*



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ABOUT THIS REPORT

On 26th September 2001, the Europaeum, an association of leading European Universities, supported by BT, hosted a Policy Forum looking at the relationships between Democracy and the Internet. The event included expert participants and practitioners drawn from academe, politics, public life, business, think-tanks, and technology companies, from the UK and abroad. The aim of the event was to identify and discuss key issues that link the Internet and Democracy, including accountability and transparency, technology and society, representative government and access to information, and help to generate new ideas to promote democratic governments and to focus future discussion and direction for the development of the Internet. The conference was divided into four sessions, The Government Vision for the Internet in the UK, The View from Business, New times for participation, New rules for Democracy. The keynote speaker was Tim Berners-Lee, who created the World Wide Web in 1989 while working as a research scientist at CERN, Geneva. A dinner was held on the previous evening, in connection with the Policy Forum.

This report summarizes the main presentations and comments and discussions at the Forum. While every effort has been made to portray accurately the opinions expressed, in the interests of space and brevity, there has been some omission and paraphrasing. The report was written and edited by Paul Flather, Secretary-General of the Europaeum, and Produced by William Martin Productions. Any omissions of fact and attribution should be attributed to the editor. The report is also available at www.europaeum.org.

The views expressed in this report do not necessarily represent those of the Europaeum, BT, or any of the groups that have contributed to this Policy Forum. Photocopies may be made. When using any part of this document, please cite the Europaeum.

WEB NOTE

The World Wide Web program was first used within CERN in Geneva on Christmas Day 1990. It was on the Internet at large from the summer of 1991. From 1991-93 Tim Berners-Lee continued working on the design of the Web, co-ordinating feedback from users across the Internet. From 1991 onwards, the Internet, which began life as a defence project, and the Web, a side effect of research into particle physics, grew as one. The 600,000 Internet users in 1991 had grown to 40 million in 1996, and to more than 300 million today.



AGENDA

26th September 2001
Sheldonian Theatre, Oxford

9.15 **Coffee / Tea**

10.30 **Welcome:** **Dr Paul Flather**
Secretary-General of the Europaeum

Chair: **Mr Godfrey Hodgson**
Former Director, Reuters Fellowship Programme for Journalists,
University of Oxford and former Foreign Editor, *The Independent*

The Government Vision for the Internet in the UK

Mr Andrew Pinder
e-Envoy, Cabinet Office

Guess Who's Coming to Dinner? – BT's 2020 vision

Mr Stuart Hill
BT Stepchange Director

Discussion

11.40 *The Impact of the New Technology on our Society*

Mr Tim Berners-Lee
3Com Founder's Chair at the Massachusetts Institute for
Technology and inventor of the World Wide Web

Discussion

12.30 Lunch

14.15 **Chair:** **Dr Colin Lucas**
Vice-Chancellor, University of Oxford

Panel Discussion: New times for participation

Dr Julia Glidden
Vice-President, election.com

Mr Predrag Vostinic
Co-ordinator OneWorld International, Southeast Europe
Initiative, former Radio B92 correspondent

Professor Stephen Woolgar
Director, ESRC Virtual Society? research programme

Discussion

15.00 *Panel Discussion: New rules for Democracy*

Dr Stephen Coleman
Director, Hansard Society E-Democracy Programme

Mr Jason Buckley
Founder tacticalvoter.net

Mr Anthony Barnett
Editor of openDemocracy

Discussion

15.45 *Concluding Remarks:*

Mr Derek Wyatt, MP
Member of the Select Committee for Culture, Media and Sport

Ms Katharine Everett
Controller New Media, BBC

16.15 Depart

INTRODUCTION

Dr Paul Flather
Secretary-General, The Europaeum, Fellow of Mansfield College, Oxford

How can the Internet be used to help save democracy? Will more people vote if they do so on-line? How can the Internet make government more transparent? Will we be able to use the web to hold our political representatives to account? What does technology hold in store for society and for the web? These were some of the issues discussed at an important Europaeum Policy Forum, sponsored by BT, investigating the relationship of the Internet – an increasingly powerful medium of communication – and the way our democracy operates.

Democracy is in trouble, we are told. Politicians have never been less trusted, and politics has become the battle of the soundbite. Ours is the age where spin-doctors count far more than intellectuals, where the media set the agenda over the manifesto. Anecdote and personality dictate over research and idea. Everywhere people are voting with their feet – by not bothering to walk to their polling stations.

More substantially, it is argued that a democratic deficit has emerged, whereby voters are not merely being turned off politics, but being cut off from their representatives by the processes of globalisation, with power concentrated more and more in the hands of international conglomerates and federated blocs. At the same time, the Internet has revolutionised the way we conduct our lives, the way we discover information, the way we collect and store information, the way we stay in touch, indeed even the way we now think. Now, set against the political crisis of apathy and lack of connectedness, the Europaeum staged an international Policy Forum looking at emerging – and changing – relationship between democracy and the Internet.

The Policy Forum brought back together leading experts from the worlds of academe, business, think tanks, politics and the media, to run the rule over this relationship. The keynote address was given by Tim Berners-Lee, US-based British inventor of the World Wide Web, who appeared in Time Magazine's list of the 100 most influential minds of the 20th century alongside Albert Einstein and Sigmund Freud. Making a rare public-speaking appearance in the UK, he insisted on participating in the event despite the then very recent events of September 11th which had led to wholesale cancellation of international events. Indeed, the attack on the World Trade Center and the Pentagon, by providing a graphic and concrete example of how the Internet can be abused by terrorists, posed searching questions for democracies about how they should respond in terms of regulating and restricting a medium that thrives on its openness, not least for Berners-Lee himself who now directs WWW Consortium, which aims to lead the web to its full potential.

In a powerful presentation, Berners-Lee outlined his vision of the next stage of development of the World Wide Web, what he termed the Semantic Web, which would revolutionise how we access information and how information and data might interact with itself generating more refined, more appropriate and more relevant information for each of us. He discussed current fears about the use of the web, the way societies are structured, and even his dream of how the web could be used in future to hold politicians to account for their statements and claims.

Andrew Pinder, the Government's e-Envoy, provided a timely reminder to the audience of the importance of emerging technological issues, and how such issues as access, authentication will have far-reaching policy implications, for example in the debate over identity cards. He also indicated his personal view that some kind of e-voting opportunities were almost certain to be in place before the next General Election. He added a warning about the emergence of a 'digital divide', a situation that could be made worse with the introduction of broadband. He reaffirmed the Government's goal of giving all citizens easy access to Internet services, and also of putting all Government services on-line by 2005.

Stuart Hill, Director of BT Stepchange, outlined where the Internet might lead the political process by the year 2020. He painted a picture of how by 2020 each citizen might have their own holographic versions of politicians, and debate interactively with 'them' based on their past speeches and manifestos. He stressed that demographic trends and rising costs meant that the current system of providing government services was increasingly economically unstable. Thus, he said, in future the consumer would also be able to use this wealth of information to shape automatically their shopping preferences, and boycott states, companies and products in an instant economic democracy.

Several propositions quickly became clear as the discussion unfolded over the day. First, the Internet cannot be regarded as a panacea to meet the democratic deficit. It is a tool, a new medium of communication, as Mr Berners Lee, put it: "a new form of paper". Second, it provides huge opportunities in connecting or re-connecting citizens to the polity. Indeed, it is arguable that the new forms of access to information when and where you want it, provided by the Internet, serves as an almost unassailable bulwark against authoritarianism, as graphically illustrated by one of the afternoon panel speakers, Predrag Vostinic, former correspondent of the famous B92 Yugoslav Radio Station.

It was the Internet that allowed media organisations – particularly B92 - to continue to provide authentic radio reports from Sarajevo in the face of censorship by the Milosevic regime. "The bottom line was that we established a new means of communication and pre-empted the establishment of the regime monopoly over this medium" explained Mr Vostinic, self-styled 'Internet guerrilla'.

Second, the Internet offered many opportunities to help re-invigorate representative democracy, - and not just in the field of e-voting which was a very specific and largely technical issue - but equally, the extensive use of snapshot polls or 'direct' Internet polling could threaten traditional relations between voters and their representatives, and distort public opinion. Many participants emphasized that these were issues that needed to be addressed with care and attention.

Third, it was too early to make too many sweeping judgements about how the Internet is changing democratic relationships. The Internet itself was evolving, and as Professor Steve Woolgar, head of a multi-million research programme into the Virtual Society noted, one of the axioms of the Internet was that it was evolving in ways that were as often counter-intuitive as not. Other speakers emphasized that the way the Internet was developing – a uniquely collaborative style of sharing and learning from one or other – was in many ways the hallmark of the very medium and promised much for the future.

The two afternoon panel sessions were devoted to examining more specifically, through the experiences of experts actually involved in working at the interface of democracy and the Internet, just was changing in the realm of democratic participation, and what were the new political rules for engaging in democratic activity today. Julia Glidden of Election.com discussed her work during the first legally binding democratic e-election in Arizona, and concluded that while more e-voting was probably inevitable, the key lesson was that e-voting should be used as an opportunity for exposing communities to the new technology and not simply about encouraging voting. "People want to vote in their own time and on their own terms. They want to vote via the Internet to get over social exclusion issues," she said. Predrag Vostinic explained how the Internet had helped defy dictatorship, while Jason Buckley explained how Tactical Voter.com had allowed citizens effectively disenfranchised under the UK's First-Past-The-Post electoral system to 'swap' votes and become effective voters again.

Opening the second panel, Steve Coleman, running an e-democracy research programme for the Hansard Society, made a powerful statement not to over-emphasise the particularities of the net – and to note how the current debate was in fact opening up fresh questions about democracy itself, how representativeness took place, where political space occurred, how informed debate and consultation could occur, and how the socially excluded could be re-connected. "The idea that the Internet is going to produce a flat democracy is a fantasy...The discussions today have intensified the need for real human conversations," he said. Professor Woolgar of the Saïd Business School outlined his rules for the Virtual Society, first that the uptake and use of new technologies depends crucially on social context; second, virtual technologies supplement rather than substitute for real activities; and third, evidence from recent studies shows that counter-intuitive results are likely. Finally, Anthony Barnett, the founder of the openDemocracy.net website for global discussion outlined his vision of how democracy was to develop, and emphasizing that the Internet allows a genuine international discussion, but this also makes it more necessary, rather than less, to create opportunities for human contacts

A number of recommendations from the day's deliberation have been distilled, to do with further research, investment, analysis and emphasis. These, together with this report, are being widely distributed to all those present, to those who had wished to attend, and to other public and private bodies. They are also being sent specifically to the Office of the President of the European Commission, who has extensive contacts with the Europaeum, to the European Commissioner for External Relations, Mr Chris Patten, who had hoped to be present, and to the Cabinet Office in the form of Mr Pinder, who called for the views of the forum to become part of a public debate on these issues which he is effectively sponsoring.

It was of course appropriate that this event be held at the University of Oxford – one of the oldest (mostly) continuously democratic institutions in the world, run by its Congregation (Parliament) of academic dons. The University is also home to the new Oxford Internet Institute, a £15 million centre dedicated to the study of the impact of the Internet on society, political and economic, with Andrew Graham participating in the discussion. The Europaeum also works out of Oxford as an association of leading European universities whose work in building collaborative international research has been revolutionised via the web. It is currently engaged in developing its Knowledge Centre, which aims to provide links open to the 150,000 academics and students and the research resources of the institutions.

It was also highly appropriate that BT was the sponsor – itself very much at the heart of the technological revolution in society and the Internet is central – providing a special opportunity for we are happy that they have helped us engaged in standing back to study how these issues are affecting us. We are most grateful to them.

March 2002



SESSION I: THE GOVERNMENT VISION FOR THE INTERNET IN THE UK

Godfrey Hodgson

Former Director, Reuters Fellowship Programme for Journalists, University of Oxford and former Foreign Editor, The Independent

We have two speakers in this first session who are going to talk for 20 minutes or so each. I want to emphasize one general thought which is that I hope that we will be able to discuss not only the impact of technology on democracy, but also on the impact of democracy on the technology, because I think there is concern in many people's minds that somehow decisions of enormous input and impact are being taken in the corporate and government worlds, in ways that somehow elude the grasp of democracy. I hope we will talk about that as well as the many positive things which technology can do for democracy in many ways, both practical, and in the wider field of information.

Mr Andrew Pinder *e-Envoy, Cabinet Office*

First let me just explain my title of e-Envoy. The original idea came from Peter Mandelson, when he was Secretary of State for Trade and Industry. He arrived at the DTI like a breath of fresh air and started talking about this thing called the Knowledge Economy. It has got to be said that Government has not always been at the heart of technology, and in 1998 the DTI had never heard of the Knowledge Economy. Peter Mandelson launched a series of ideas, which were picked up by other parts of government, and eventually resulted in a report that said that the Government really had an opportunity to get 'on board', and make a big leap forward, in the same inadvertent way that this country had round about the beginning of the Industrial Revolution, in 1730-1740, when there was a 'discontinuity' as it were in the technology, and with the fortunate congruence of a number of inventors and natural resources, suddenly led to a big boom and the UK, for a while at least, becoming a world leader in inventive progress and economic wealth. The plan was – and actually still is – that here is an opportunity if we seize the moment. We have an opportunity to jump on board this train that is leaving the station, to get in the first class carriages, right up at the front, and make ourselves a wealthier country and a better place to live by again becoming a world leader.

The job of the e-Envoy is to sit in the Cabinet Office (though I am not quite sure that the Cabinet Office is actually the heart of government) and my job is to try to galvanize Government to bring about change in the rest of the economy.

However, it is important to remember that I walk around with a big albatross around my neck: the most important target that the Press seem to think I have is to get all Government services 'on-line' by the year 2005. It is not: my real job is to try to lead the charge to get this country ahead in the world in e-commerce and really make a big difference. Everyone has got to take part in that – the private sector, the voluntary sector, individuals, as well as Government. I would like to talk for a few minutes on that plan, then focus on the democracy side of it, which is where I think we have done least and where I am more worried.

I guess the campaign to try to get the UK 'on-line' – and there is a campaign called UK-Online – for which you will have seen, I hope, some advertising earlier in the year and more advertising starts in November – is to try to involve everyone in getting ahead. But Government has some particular responsibilities. One of those is to try to make sure that the national infrastructure is in decent shape and that infrastructure includes the legal infrastructure, making sure that we have the right 'enabling' legislation. Thus The Electronic Communications Act (ECA) enables the use of things like digital signatures rather than the written word, overturning the obstacles caused by hundreds of years of legislation built up around the requirement of paper signatures. The ECA enables us to start removing the obstacles. Then there is the infamous Regulatory and Investigatory Powers Act (RIPA), the law for snoopers on the Internet, which had a very stormy time last year and into the beginning of this year.

The physical infrastructure, the area where we are probably doing least well, and I hesitate here as BT has very generously sponsored this event but obviously BT are part of this, our relative failure to roll out broadband as compared with the rest of the world. Broadband is the Internet of the future. It is crucial for our future prosperity, and we are not hacking it. In every world league table of performance, we tend to come out as number 1, 2 or 3 in various performances to do with the Internet. But with the rollout of broadband, you have to stick a 2 or a 3 in the front of that league placing. For example, we are in 23rd place out of 24 OECD countries recently measured. That is a big concern for us – and moves are now afoot to try to do something about that.

Moving on, the rest of the national infrastructure is 'our people'. We want to involve all the people in this country in this movement. If we fail to do that, then we will not be mobilizing all our natural resources, but even more important, particularly to this Government, is the need to avoid social division becoming worse than it already is. Therefore the so-called 'digital divide' is a big issue for us, and takes us back again to broadband.

Broadband not only brings about the possibility of a digital divide but also, because of the physical nature of the asset, brings a real danger of a geographic divide. Nearly 85 per cent of the UK land mass is not within reach of a broadband connection. That is a problem for us. We are very concerned to make sure that the natural assets of the country – whether they are people or infrastructure – are in decent shape, and we want to put a great deal of effort into that. We have a commitment to enable all UK citizens who want it, to have access to the Internet and we are trying to fulfil that. We are trying to make it possible even for people who cannot afford it, or who are not motivated, or who are uneasy about using the Internet perhaps because they feel they are getting older and are unwilling to learn new things. In addition to trying to bring about schemes for communities where we offer cheap PCs, or help in getting individual communities on-line, we are also opening up a network of UK-Online centres. The plan, when this network is fully built, which ought to be around the end of next year when we should have about 6,000 centres, is to have a UK-Online centre within reach of everyone. This means within about a mile of everyone in an urban area, and within about five miles of everyone in a rural area. Now, obviously, that doesn't apply to people in some parts of Scotland and Wales, but for most of the UK we hope to be able to achieve that. UK-Online centres are places like libraries, community centres, a few are in back rooms of pubs – places where people can go to get access to the Internet at little or no cost, and can get assistance and help in getting themselves on-line. The idea is, of course, social inclusion: we want to try to include everyone to give them access.

Finally, this infamous thing of 'getting government on-line'. The commitment is to have all government services on-line by 2005, and that includes local as well as national government services. Local government is always an issue for central government in this country because of the uneasy relationship it tends to have with the 400 or so local authorities. Everyone is working quite hard to get as many of these services as possible on-line. I am less concerned about achieving that target, than about getting the principal government services on-line, and much more importantly, getting them used. It is much more important that we do not just have this 'tick in the box' approach that says some esoteric service is available if anybody is misguided enough to want to use it. We really want major services on-line and people using them because they are easier and make life better.

This brings me to e-democracy. One of the Government services that we want to get on-line is e-voting. We want people to use e-voting as we hope it is going to make voting easier. This is clearly a matter of concern certainly after the last elections. But really the declining number of people participating in the democratic process has occurred in repeated elections through my lifetime. This obviously is a big issue for us. Convenience may not be the only factor, but if convenience can help that then let us try to make sure that things are more convenient so people vote. There will be a number of pilots running over the next two to three years, and I hope that by the time the next general election comes, whenever that might be, that one of the options available, in addition to physical voting at a polling station and postal voting, will be voting on the Internet. Now e-voting is actually a technical issue, posing technical problems with one or two major policy issues. The key policy issue is around 'authentication'. At the moment everyone assumes that we have a secret ballot in this country, but those of you that have taken any trouble to really think about the voting process know that we do not. When you vote at a polling station you have numbered ballot papers and that number is written against your name in a register, so votes can be recovered in case there is a dispute. To all intents and purposes we do have a secret ballot, because people do not investigate that, except to deal with disputes. But when one comes to electronic voting, that issue is ripped open. Either we allow people to walk up to an Internet station and just assert who they are, allow them to vote, and deal with the consequences – and the traceability of an electronic vote is harder – or we insist on stronger authentication, so you have to prove who you are before you vote electronically. There is an awkward policy decision here and it is one of the issues we want to investigate.

I would now like to move on from e-voting. There are actually a number of people in this audience who know a lot more about the subject and in fact we have somebody here who took part in the world's first e-election democratic primary in the States. So they know more about the technicalities than I do. But for me the much more important issues are not around e-voting, which is a technical issue, but around the democratic process. I woke up to this issue earlier this year when I was asked to do an interview for a broadcasting trade magazine, and the proposition was put to me: 'Aren't you really pleased that people like Sky are doing instant Internet polls on items like the Chancellor's budget speech and so on, and doesn't that enhance democracy?' I thought about this, and talked to colleagues, and we came to the conclusion that probably it did not enhance democracy, that it was, in a way, a problem for our form of democracy, which is 'representative' democracy, not direct democracy. The whole point is that we have a dialogue between representatives and their electors, a dialogue that leads to informed voting, both by the electors at the time when the election is held, but also, in particular, by representatives as they exercise their representative capacity. That seems to me to be the crux of the issue.

The Internet is, in some respects, a threat to that form of representative democracy because it offers the opportunity for institutions, whether they are central or local government, or trade unions, or other bodies, to dis-intermediate the representatives that we have traditionally relied upon to act, as it were, as a shock absorber between people and law. For me then one of the important issues around at the moment is how we use the Internet, not to be a danger in that sense but as a positive asset, to enhance representative democracy? We want to do some work around that. One of the big issues within government dealing with this sort of subject is that it is not natural for governments themselves to deal with, and that seems rather odd because governments are all about making sure that their country is run well. But the way government is organized, whether at local or national level, is around subjects and policies: people are responsible for Transport, the Internet, Defence and so on. No one at the heart of government is actually responsible for democracy. Democracy is a matter for us all, in particular for the whole of Parliament. Parliament itself is a rather odd animal, and there are a couple of MPs here, Graham Allen, Derek Wyatt, who understand that Parliament is a weird institution, that finds it very hard indeed to speak with one voice when it has to. One of the issues we are facing is how to get a debate going on this very important subject, and out of that debate a series of policies, which gains agreement in the country as this is so important to us so that we can use the Internet as a way of pushing democracy.

My department has produced a piece of paper which is an attempt within government to start the debate rolling, and we hope over the next few months to circulate that more widely, to get more people involved in the debate on what government can do in relation, in particular, to the Internet, to enhance the democratic process. Clearly there are other organizations, and this is one of them, that will have a major role to play. We have a number of people here from the Hansard Society for example, who have a major role to play in stimulating the debate. But we need to get a debate going which is sensible, that does not just rely on the emotion that says 'of course giving everyone the chance to have a plebiscite by voting instantly across the Internet is great', because I do not think it is. It will lead in my view to hasty and ill-informed judgments. Therefore the representatives need strengthening so that they can play a part in tempering and leading those judgments, leading popular opinion rather than allowing organizations like the press to push public opinion along in a very emotive way, without being particularly informed.

This debate today is a very important one. We wanted to have a minister here today to emphasize that it was an important one. The events of the last couple of weeks, I am afraid, have made that impossible and we have had to apologize to Paul Flather for not being able to produce a high-profile speaker for him. We hope you understand. Nevertheless it is something that is centrally important to government. I have been walking around various parts of government talking to a number of very high-profile people about this particular subject and every single one that I have spoken to has expressed a strong interest in it and a desire to own the subject. So politicians in a number of flavours are very interested and want an active debate to be held. It is also important that other people take part in that debate and, in some respects, lead the debate. So I wish you well with your seminar today, I hope it goes well and am looking forward indeed to the next speakers and the debate immediately after that. I also look forward to there being other conferences like this that perhaps explore the subject in a rather more leisurely way. I think this is really the subject for a two or three-day conference and I hope that the Oxford Internet Institute and other organizations within Oxford can play a central role in that, because I accept that Oxford has a central role to play in democracy. The dangers of democracy of course have been shielded by Oxford Colleges on occasion acting in odd ways, but nevertheless Oxford as a town and as an institution has a major role to play and I look forward to taking part in more debates here. Thank you very much.

Session II: Guess Who's Coming to Dinner? – BT's 2020 Vision

Mr Stuart Hill *BT Stepchange Director*

Fancy having the American President to dinner – or the year 2020 equivalent of Tony Blair? It will not be long before it's possible to have a life-size, virtual guest sitting at your table. Actually I would suggest Madonna. But, of course as serious democrats we'd much prefer a politician, wouldn't we?

The possibility of debating rooms involving life-sized, three-dimensional images of – well, to put it bluntly, anyone in the world whom the Internet generation might wish to interrogate...this is no longer the stuff of science fiction. It's on the horizon – and only those still opposed to democracy would want to refuse your invitation for their virtual selves to join your political dinner party. Hopefully, by 2020, such perversities will be even fewer on the international stage.

OK, computer technology is still a little too sluggish to render lifelike images of that size in real time and give any sense of contact. But not for long. As soon as such large screens are affordable, the processes will be available. No doubt about that. Household computing will be accessible from any room. Politicians and civil servants at your beck and call? Perhaps not quite. But if I were one I would be thinking seriously about the implications of all this.

Beyond the technology, beyond the horizon of what we can see today – which is exciting enough but only technology, and no more incredible than the £12,000 it cost to erect this magnificent building in 1667, or worldwide jet travel to parents and grandparents only 50 years ago...beyond the technology – are issues both exciting and disturbing at the same time.

What are these issues? In a networked society, people have more and more access to an ever-widening base of knowledge and contacts. This has enormous implications for the exercise of power.

Historically, social, business and political structures have been founded on asymmetry of knowledge and hence power. A handful of people – chosen in a democracy, enforced in autocracy – made decisions on behalf of the majority. The orthodoxy dictated that, as the masses couldn't possibly comprehend the issues involved, neither could they participate actively in government.

Today the Internet and the worldwide web are sweeping away the lingering vestiges of such practices, just as they're changing so many other aspects of our lives.

By 2020 computers will have a natural language capability. They'll be at least as fluent and intelligent as humans and possibly more than some I know! They'll also be accessible to most people worldwide. You could argue that this won't necessarily lead to quite the open system the 'net utopians predict. Culture and politics might create lingering national 'Intranet islands' – countries that remain implacably opposed to democracy, freedom of expression and contact by their citizens with the outside world. Might the Internet spell the end of dictators and other leaders intent on keeping their people subordinated to their will? We must all hope so. As individuals gain more knowledge, their choices change their behaviour.

Big organizations flourished under the old asymmetric model. In a world of imperfect knowledge, and hence imperfect markets, friction could be overcome by might. The citizen was subject to the power of the state. The consumer was at the mercy of the big suppliers. The debate over European car prices in Europe underlines the vulnerability of the big suppliers to the spread of knowledge. I predict with some confidence that government in all its forms will be more and more vulnerable to similar pressures as 2020 approaches. Many would say 'And a good thing, too!' But such a trend is a challenge as well as an opportunity. As in all uncharted waters, danger lurks. More on that later...

First what will start to emerge? So that I am protected, first a quote from Tony Blair in 1996, just before his first term, I believe this is rather telling of his general view of Government at that time:

'We can continue with the over-centralized, secretive and discredited system of Government that we have at present. Or we can change and trust the people to take more control over their own lives.'

n this emerging networked society, the balance of power shifts radically from the big battalions to any one of us. People go to the car dealership armed with downloaded reviews, price and feature comparisons, personal recommendations... They go to the doctor's with knowledge of their ailment and the side effects of the drug their GP might wish to prescribe. And they vote with perhaps more understanding of their pet issues than the politicians. Deferential citizens become demanding consumers.

The trend will be most marked in the advanced democracies. But its ripple effect will soon create powerful currents in even the most secretive and repressive corners of the globe. In business, the days of the big, vertically-integrated corporations are numbered. Perfect markets are intolerant of monopolies or protected supply chains. Commercial advantage is short lived, pricing transparent. Business agility is the order of the day. Firms must be able to assemble and dissolve virtual enterprises to meet rapidly-changing consumer needs. Hierarchies, isolated decision-making and insular thinking – these have no place in our wired-up world.

In such a world political agility will also be at a premium. Our MPs, I'm told, have a problem with e-mail. They've been used to communication with constituents via letter and secretary. Now people are bombarding them with e-mails – and, not unnaturally, they expect their MPs to respond, if not in real time, then certainly not a week later. Some MPs, I'm informed, are burying their heads in the sand. They hope the problem will go away. It won't. It will get worse – or better, according to your point-of-view! All I can say to them is: 'You ain't seen nothing yet!'

Demographic trends and the burgeoning cost of vital services, especially health, mean the current system of providing government services is economically unsustainable. When you combine such a prospect with an increasingly fragmented and complex society, increased education and hence awareness and access to knowledge, this suggests that traditional government also becomes politically unsustainable.

More and more, government will lack a popular mandate from people who are not socially aligned with traditional parties and do not feel deference or allegiance to their leaders. There is much debate about the alignment of private and public sectors regarding the delivery of flexible outsourcing arrangements despite loud protestations at private involvement in public services. New forms of publicly-accountable enterprises or ventures will emerge.

Within government, the facility to share information on demand (where privacy permits) and collaborate across the old boundaries will be an everyday occurrence. All organizations will have to be 'intelligent' in order to survive. That means having highly-developed internal neural systems to share collective knowledge and stimulate collaboration. And, externally, building commercial relationships in real time and winning shareholder or stakeholder support. The commercial game will move from mere communication (today) to instant collaboration. The political game will shift from waning representational democracy – 'I appoint you to make decisions because you somehow represent my class/area/aspirations'. It will head towards collaborative popular democracy – 'I want a say in everything that concerns me'. The business ecosystem is already changing. Its political counterpart will have to do a lot more than simply handling the same old representational system electronically. Businesses have seized the opportunity of the Internet to dismantle old processes and reconstruct them more optimally. So must we, as citizens, seize the opportunity to reinvigorate democracy to match the digital age...to reconnect the institutions of power with the people.

Andrew Pinder has predicted that Internet voting is likely by the next General Election, and I tend to agree. But this will not necessarily address the issue of low turnout. The present vote is based on the need to appoint a few empowered decision-makers locally to act on our behalf...to have class and campaign-based proxies trusted to manage issues we find difficult to understand, and lack the means or knowledge to participate in actively. But this is changing. Many are losing patience with what they see as the four-yearly exercise of negligible influence called a General Election. We have less and less need of geographical representation by MPs. More and more us feel the need for direct action: blocking a motorway; sitting outside a fuel depot, occupying an oak tree... Many citizens feel uncomfortable with such manifestations. But, unless we can come up with an alternative, my guess is that they will become increasingly tolerant of them.

Earlier I talked of potential dangers of the new technology. The Internet has already been used regularly by some groups to coordinate demonstrations. In Britain there's been the 'reclaim-the-streets' movement, those against genetic modification and the 1999 fuel protesters. Internationally... the movement against capitalism and globalisation, showed its muscle most recently in Genoa and evidence suggests that those who perpetrated the devastating attack on New York and Washington partly used the Internet in their planning.

There's a lot of other evidence of the speed that messages travel via e-mail. For example – rapidly-building panic-buying based on nothing more than rumour. There has been a rush on buying gas masks in the last four days where a particular distributor said he sold more in a couple of days than he would have in several years. Many see such things not as a problem but as a way to boost the power of people in the face of perceived increasingly remote government and monolithic international bodies.

Such actions take place in a world where only five per cent of people worldwide use the Internet. In the context of our 2020 vision, access can be slow, e-mail primitive – and there's no simple way of finding and reaching others with the same views. Nevertheless, the Internet is still effective enough for protest to be coordinated without any formal leadership. Consequently, there are no ringleaders to be targeted by the authorities.

In a few years almost everyone will be using the Internet. It will be embedded, all pervasively, into every area of life – simply because it will make things much easier, less stressful. Access rates will be high. People might actively choose to belong to various cyber communities. So any actions to date are but a glimpse of what's to come. Imagine an e-mail from a future world chief environmentalist being sent to everyone using the net. The e-mail tells users that a particular country has been damaging the environment through a reckless energy policy. It recommends imposing economic sanctions to persuade them to change. At the bottom of the mail are two buttons. By pressing the 'I agree' button, the user's e-commerce preferences are automatically set to exclude products and services from that country. The result could be millions of people excluding that country from business – within seconds. No geographically-based power structure or country could impose such a penalty so quickly. Few could withstand it. What's more interesting is that if such a country still refused to change policy on the basis of economic sanctions, the pressure could be made even more direct. Having a high-technology-based economy makes them particularly vulnerable to all forms of cyber-attack. There are an infinite number of ways to bring down complex systems.

If a few hackers can bring down Yahoo, e-bay and Amazon, what could thousands of simultaneous attacks from a massive cyber community achieve? It's impossible to retaliate. You can't fire a missile at an anonymous cyber community. The Y2K problem showed us how dependent we already are on our electronic systems. Unless we are complete anarchists we can't be completely comfortable with such thoughts. In view of the terrorist assault on New York and Washington, I should be very surprised if such considerations are not being given even

greater emphasis in the threat assessments of the US and its allies. Issues of national security aside, do many of us bemoan the fact that the monopoly and its hierarchy look as relevant to 2020 as the titan conglomerate of the 1970s?

So what will happen to democracy? If we were standing in 2020 looking back what would we see? The big industrial conglomerates have collapsed or been restructured. Totalitarian regimes will be greatly eroded from within. Both have been subject to the attrition of networked knowledge. People, more aware of their neighbours and their options are intolerant of restriction, be it commercial or political. Traditional democracy is similarly being eroded. Will people want to be involved in every public decision? No. But, in the same way that so-called intelligent agents are already starting to exercise purchasing decisions, so too are our digital alter egos. We shall develop our own network persona – in many ways some of us already have. This will be capable of interpreting and assimilating our preferences and opinions and exercising them on-line on demand. Thus our digital persona will mediate our access to the vast networked intelligence available. It will filter and personalise our experience of the knowledge pool. It will operate in our language, understand our nuances, comprehend semantics and speak fluently in a modulated human voice.

Against such a background, real-time collaboration between government and the electorate is imperative – not just on-line but involving people in key decisions, particularly at local level. A radical agenda of constitutional reform...greater devolution and decentralization of power...increased citizen involvement at policy or service-delivery level – all these can be paralleled and accelerated by the swiftly-evolving collaborative potential of the Internet and its associated technologies. In the absence of reform, our traditional public institutions will be bypassed and neutered. The 'networked persona' that organizes your holiday, buys your food or arranges your diary could also be 'voting' on your behalf – on anything from embracing the Euro to the street lighting outside your home.

The test, ladies and gentlemen, will be whether, in 2020, when you invite the Prime Minister to dinner, you question him yourself – or leave it to your network persona while you concentrate on the serious business of eating and drinking. Or go to another room and chat to Madonna about her life as a pensioner.

DISCUSSION:

Dr Tina West *Consultant:*

I would like to support Mr Hill's point. I was in Nairobi last week. There are now hundreds of full cyber-café's, and Kenyan citizens abroad are participating in the Constitutional review process, and the lives of the academics and lawyers have been revolutionized. But this is very much a capital city phenomenon in Africa: if you are older, not educated, living in a rural area, poor, your medium is still the radio and the most trusted source is the BBC World Service local language service. As well as pushing ahead on the Internet, is if it 'ain't broke' don't neglect it.

Beth Porter *Women's Forum, Bristol City Council:*

We are involved in a democracy project to bring IT Training to the women of Bristol, but to Bristol City Council you would have thought we were in a project to kill their first-born. I think that national and local government is scared and protective of what they are doing. They're scared because they don't understand the technology and they are protective because somehow they understand on some visceral level that popular democracy, which this technology enables, will put them out of a job or at least threaten or change their constituency to maybe one of service, which it probably should be anyway. So I think what we really have to remember in this debate is, what does democracy mean, it's about the people. It's not just about people's views being put into some electronic Hyde Park Corner and laughed at or ignored but actually to use the technology to organize it in a way that is meaningful. You cannot just have a flood of e-mail and electronic opinions because they will be ignored in a representative democracy. We all know that decisions as open and transparent as we want to make them be are still made in collaboration and behind closed doors and I'm learning a lot working with the City Council believe me. There's an opportunity here and it's a problem, it's a challenge and I think we have to address and embrace it, otherwise we are going to be overwhelmed in ways that we can not even begin to understand. Thank you.

Terry Johnson *Europaem:*

The point that Stuart Hill has made is that we now have access to an immense amount of information. The only thing that counters that is the amount of information that we don't have access to because it is still controlled through copyright, through proprietorship and secrecy. The information that people really need to make concrete democratic decisions – a lot of that is still owned, controlled, and not actually accessible to the people Stuart Hill says, in 2020, will be making these decisions. So if knowledge is the new capital, Stuart Hill is the new Karl Marx, because that knowledge will actually have to be freely available – otherwise most of the demos will not be able to participate in his democracy. The other question I would ask is: Is knowledge equal to information? Everybody I have talked to, as somebody who is involved with networking, trying to get systems up and running, to share knowledge across the Internet, immediately comes up with the words 'information overload'. We have to find some way of digesting the information that is available, searching the information, making that information actually useful. Because there are millions of millions of terabytes of information on the Internet, which is probably useful to me – but if I can't find it, it is not useful. Coming back to the first point, a lot of the tools which we would use to do that, the operating systems, the search engines, the knowledge management packages are all again subject to copyright, subject to the payment of a large fee to use some of this stuff. The original vision, which Tim Berners-Lee shared in making the World Wide Web browser open source and open to everybody was great, and had that tradition continued we would be in a much better position. But without such vision, with everything restricted in its use, only available to the few, is this vision of 2020 going to happen?

Paul Whitehouse

ex-Chief Constable, Sussex Police:

I listened to Andrew Pinder saying that the question of voting by electronic means was essentially a policy one. Perhaps he could explain to me the difference between walking into a polling station and saying I am Paul Whitehouse, I live at such-and-such an address with no further identification, and logging on at a terminal at home and saying I am Paul Whitehouse and live at such-and-such an address, with no further identification? Surely you can have an audit trail on your computer system?

Andrew Pinder

e-Envoy, Cabinet Office:

I was trying to make the point that if I walk into a polling station, and say who I am and vote, and then someone without a beard walks in behind me, and says 'I am Andrew Pinder, I would like to vote as well', that dispute is capable of being resolved by the two votes being recovered. It is actually a very rare event except in certain parts of the country. If we want to have people who can just walk up to public-type Internet terminals around the world, which is what we would want to have happen, that raises wider issues than someone popping down to their local polling station, a relatively narrow area, and voting. You can travel 6,000 miles and if you are in Australia and go and vote in that local polling station. The Internet raises that relatively small issue of how you authenticate and prove or not prove because, after all, the system works on the system of trust. I would like to see the situation where people can just go and assert who they are.

Caspar Bowden

Foundation for Information Policy Research:

At the heart of the electronic Government project is a question of identifying yourself to government. But one of the fundamental discoveries of computer science over the past 20 years is that it is not necessary to identify yourself in order to authenticate yourself for a transaction. The level of the discussion we are having today bears no relation to the state of the art in computer security. There is an 8-year literature on ways of securing electronic ballots and providing an audit trail, without compromising either the secrecy of the ballot or the susceptibility to systematic insider fraud. We believe that it is impossible to get these issues over to a wider public. My great fear at the moment is that IT companies, flat on their backs from the current blip, are foisting systems of identification on us which are really designed for the corporate world, which are totally unsuitable for the relationship between government and the citizen?

Andrew Pinder

e-Envoy, Cabinet Office:

Caspar and I are old sparring partners in this whole area of authentication and debate goes on. The issue is wider: are we going to give people identity cards, anonymous identity cards not authenticated so you just fill one in or not? That is a wider issue, raised in e-voting but not in personal voting at a polling station. I am relatively agnostic on which way that policy issue gets resolved. The issue of proving your identity, or authenticating yourself, is a complicated debate that goes on. There are whole conferences on that particular subject, if you want to go to them.

Michael Kaser

St. Antony's College, Oxford University:

In The Times a letter today talks of the BBC's elimination of World Service broadcasts to North America and Australasia which cost £500,000 a year. Now the problems I think are two-fold: there is always a cost in joining the Internet, but above all, there is a time budget. Radios can be listened to in the car, at breakfast, by night, whereas access to the Internet requires a deliberate decision to engage yourself. Therefore I feel it is a gross negligence of influence upon public opinion in those English-speaking countries to save a trivial sum and rely on the Internet. It will be a very long time, I think, before the radio as an influence on public opinion is replaced by the Internet?

Godfrey Hodgson

Former Director, Reuters Fellowship Programme for Journalists, University of Oxford and former Foreign Editor, The Independent:

Tim Berners-Lee is, as many of you know, a man of extraordinary creativity. In an extraordinary burst of intellectual energy he introduced us to these concepts that have become so familiar, of HTTP, HTML, URL and, above all, the World Wide Web. He has been uniquely concerned with the idea that the Web should be democratic, that it should have a social and

democratic purpose as well as a purely technological or business one. This is best expressed I think in the introduction to his book which said that most of the entrepreneurs involved in the Web asked 'How can I make the Web mine?', and Tim Berners-Lee said: 'How can I make the Web yours?'

KEYNOTE LECTURE: THE IMPACT OF THE NEW TECHNOLOGY ON OUR SOCIETY

Mr Tim Berners-Lee

3Com Founder's Chair at the Massachusetts Institute for Technology and inventor of the World Wide Web

It is quite moving to be coming back to Oxford after graduating here 25 years ago though a pity to come at such sad times.

I am going to look at the Web and democracy generally. The way we self-organize as human beings is such that we can manage our common things with self-respect, with mutual respect, and, like the Internet, it is all about communication. Now, going back to the start of the Internet, late 1989, what I really wanted in those days was to make the Web an information space, built on top of the Internet, where people could communicate by sharing information.

I do not see the process of communication as being me just saying something and you doing your best to understand it, and if you look puzzled I say it again, or you ask questions. Communication is a lot of really interesting processes. We work together and then we exchanging things. (In fact, I'm going to be as quick as I can, so that we can get back to our questions.) As we have this exchange, we, in fact, build up new concepts. We are not just trying to transmit the old ones. By the time we leave this room this afternoon, we will be a little bit of a group, because we have some common understanding, because we shared use of some vocabulary, for example, and we will also have erected a thin information boundary fence around us. When we use those terms amongst ourselves, people outside will have a little trouble understanding. This is always a trade-off, a tension, all about 'culture' and 'sub-culture'. There has been a question about how you structure civilization since time immemorial and it is a really interesting way, of looking at the problems of democracy.

I do not regard, frankly, the problems of e-democracy as getting everybody to be able to vote for an elected person, or getting everybody to respond to an e-mail, which has been sent to every single person allowing them to express their opinion. (A very large proportion of people receive enough e-mail as it is.)

Now you certainly cannot just operate as one big mass. We have many choices of structure. Whenever you have a sub-culture or sub-group of any size, you make a community work better 'within' itself, you create a very important boundary, and boundaries are as important as communication.

Some people saw the Web as being a wonderful 'thing' for global communication, for information which is free and public, and read by everybody. It is wonderful. There is a huge amount of information, which can be read by anybody. It does not have to be read by everybody, by the way, I think that is where some people get panicked, where they feel they have to read everything.

Since the Web started, I have had two fears often presented to me. One, for example, from the French: if we open the pipe to America, then surely our culture will be destroyed by McDonald's coming down the pipe from the States? Why they think the pressure of culture from McDonald's should be stronger than the pressure of culture from the Louvre, I don't know. It is a serious concern that if we have a global network, we will homogenize our culture, and end up with the lowest common denominator. Language will contain only those concepts which are sufficiently bland to be understandable by absolutely everybody, and so we will lose all the richness. We could lose Welsh and Greek, and it is clear to me that would be horrific for a couple of reasons. A homogeneous system is clearly very dangerous. We need people with diverse ways of looking at the world, with different sub-cultures in the world.

At the same time, the other fear expressed to me is that now we have the Internet, surely we will get the formation of cults? People do not have to be in the same place, they can just be in the same mental space because we can filter e-mails. You can only visit websites that have been pointed to you by an e-mail, which is from people who are a little bit crazy like you, and those websites will point to each other, and very soon you will end up in this cultural pothole, which is very, very deep and very, very slippery. When you stagger out of your basement into the sunlight because you have to get some more Coke and pizza, you bump into a real person, another person, who is not in your same cultural pothole, and the only common language you have is violence.

This was an abstract problem until two weeks ago. So, it is important that as well as diversity, there is a balance in society as well as nature. Anyone remember a fractal pattern – like the coastline? As you fly above the coast, it has a certain interesting structure. Then you fly down to a tenth of the altitude and it still has an interesting structure. You get closer and closer, until you are looking at the way the seaweed curls around a few of the pebbles, and it still has an interesting structure. It has structure in all levels. I have a gut feeling that society needs to be like that. In order to build a democracy, you have to have structure. It cannot be a simple structure, which operates just at one level. Think of some societies which have gone wrong and you will find that they have been much too flat. They have not had an interesting sub-structure. We need a complicated structure, which is fractal in some way. That means that our society, and the technology which we use to support it, has to work and pay attention at each of these levels.

So, let us start at the bottom. When you are thinking about how to spend your time, maybe you should take the hours of your week and divide them into ten boxes, depending on whether you have been dealing with personal time or family time, or the next box up, national issues, world issues. At the end of the week, see how you have spread it – see whether you have a balance in your own personal use of time. Let us quickly go through a few of these levels. First, the personal level – how does the Internet at the moment support it? Concerns are rife, of course, about privacy, and there are ways in which technology can allow a person to protect themselves. (I think it is a worse problem in the States than it is in Europe, because there is less legislation over there.)

We have technology that has come out of the World Wide Web consortium called P3P – the Platform for Privacy Preferences Project. As you go into a site, which starts to ask you for information, your browser will automatically pick up the privacy policy of the site. It will not just pick it up as an inordinately long piece of very, very small print, it will pick up a mathematical matrix, with standard types of information, or standard uses, explaining ‘we will do the following things with this sort of information from you’. But this will not work unless there is legislative backing. For example, if a company can just ignore all these privacy protocols, then it only takes one rogue site to extract all this information and sell it to the highest bidder, and then the consumer/individual protection has gone. There are a huge number of issues in which the boundary around the person is at stake, but a lot of these are not new with the Internet. The Internet sometimes shines a rather harsher, brighter light on it than before.

Now, let us look at how we use the Internet in larger groups; within the consortium (or Standards body). We have working groups, which work with perhaps 12 to 20 people in a group, interacting with maybe 12 to 20 other groups trying to put together new technology. These groups try to use the technology as much as possible for collaboration. They have to collaborate across a distance – nobody likes leaving their family and friends, and flying too much. So, we have tried to give each group a part of the Web, a place that any member of the group can go at any time of the day or night, and chat and discuss issues. It turns out, there are a lot of mechanics you have to put in which are tricky.

When you buy a Web Server off the shelf, you do not get the ability to control who has access to information. It is, in fact, something which is a very important part of the process of producing documents. People will not share things if they feel it is immediately going to be public. For the group to work, it needs this information boundary. It has to be able to control access to its crazy idea, that it is a bit nervous about. Then it needs to be able to determine who it is going to negotiate reviews with. Later on, it comes to the horrible point where it has to expose its views to the world in general – when it realizes what a deep information boundary it has built around itself. Then, hopefully without moving all the documents and rewriting them all, and changing all the URLs, it needs to be able to give more people access. So we have found we have had to put in a lot of tools, which didn’t generally exist, to allow control over these social matters, such as who has access, who can read documents and who can write documents. We found that, as we allowed more people to read them, we had to do things like keep track of every single version, so that people knew they could go back in case one of their colleagues made a mess of it, and so on. So in fact, you need a lot of powerful tools and a lot of things that we just still do not have, to make a group work.

Now we’re going to look at the way families are using the Web. For me, this is really important. A lot of people are very excited about the way they have managed to share photographs. But very often, you find that to share photographs within a family, they have put them on a commercial server, which has made them public. Now some servers actually allow you to create a group for your family. After you have come back from your holidays, and your family has gone back to their individual homes, you can get together on a conference call and you can sit in front of your screens, sharing and building a photograph album together, agreeing or laughing about which ones you had better file out because you would not want them to be seen by future generations, but eventually ending up with a common view of what were the high spots of the holiday. It is like

a design process. It is a very creative process and you are putting together a common understanding, building the family up as a unit and to do that you need all these tools and you need them available in a very intuitive way because you want your grandmothers to do it as well as your grandchildren, and that just is not there. The technology needs a whole lot more deployment.

So, moving up, how do we use this for larger groups? There has been a lot of talk about voting – I will not talk a lot about that. But I would love to see a new genre of communication evolve on the web. I would like to see a debate with accountability. I have seen the sort of rhetorical debate, which maybe the Oxford Union has a lot of responsibility for, in which you can win the point of the moment. But if the debate is going to be the stuff of making policy when somebody says: ‘Two-thirds of the children in the United Kingdom are doing this’, and the other says: ‘No, oh no, only a third of them are’, I would love to see that with links. I would like to see the people responsible for those statements go back and justify them. I’d like to be able to go back and see a version of that. If this is an important debate, going to lead an important decision for the country, I would love to see a certain amount of responsibility and if necessary I would like to see the thing being withdrawn.

Would it not be wonderful if even the television talk show is later cut into little snips and put on a website and decorated, and the people who held responsibility in the following weeks, would say: ‘Now, first of all we would like to read you 13 things you said last week which were proved to be demonstrably inaccurate. Would you like to apologize, before you come on the stage this week?’ Dreams, dreams, dreams?

So, moving up to still bigger areas – the nation. I have a problem with the nation at the moment. There are a lot of flags flying in America, and when I think of it as a symbol of togetherness and of the enormous amount of warmth which is being shared between all Americans at the moment, it is wonderful. When I see it as a symbol of one country against others, it is pretty frightening. So when looking at the balance between these top two levels – of nations against the world – obviously everyone realises we are in a critical position, where the gaps, the digital divide, is just the one extra item at the bottom of a very long list of differences between the developed and the developing world, between the rich and poor countries, which we need to fix. The frightening thing here is that the world is getting smaller to the extent that you can almost put your arms, metaphorically, around it. The hope is that maybe we are getting to the point where the Internet and radio will get there, and there will be understanding. There will be enough families exchanging snapshots, and the level of

penetration will get to the point where we do have enough global harmony to prevent war. It is just something that people have been dreaming about. Maybe the Web can help do this. I think it is an open question as to how you actually increase the amount of communication. Do you eliminate these isolated potholes, or is there something in the way people behave that means there will always be certain people who, even if you give them the ability to communicate, to see how other people live, and to realise that they are actually human beings and have the same issues as you, will still fight and rebel and do damage. I do not know. I guess it is a question of psychology.

On a world scale, I think the divide is a very serious problem. I am glad it is being addressed on the UK side, but, frankly, looking at the UK and the USA, I’m not too worried because I think they will get there. Televisions have, basically, got there, telephones got there, the Internet will get there. But I am glad people are worrying about it because it is only if people are worrying, that they will get there. The bigger gap is between the developing countries. We get these awful questions: is it really just a slap in the face with a wet fish to give someone a high-speed, optical, connection when they don’t have clean water? I have heard stories both ways. I have heard, from a missionary who went in to try to help restore people’s morale in a war-torn area, about a boy who had somehow got himself an Internet connection. Having learned English from a translation of the Bible, he managed to set up a business doing translations into his local tongue. He was actually bringing money into the village by this translating service, which seems too good to be true. The money could then pay for PVC tubing to bring in the piping.

So that is one side of the argument. The other is that it is ridiculous to put in the Internet before you have got basic healthcare. All I can say is we just have to put our efforts into doing all these things, and we can do it out of altruism or we can do it out of selfish feelings. It is going to be equally important for both to create a stable world. Talking about stability, when the crisis occurred on the 11th –the cellphones where I was were basically unusable. The system was so overloaded because everyone wanted to call home, and say that they were OK. A group of us were in a meeting at a retreat, where we deliberately did not have a lot of connectivity. But there was a phone line and, being geeks, we immediately set up a wireless network within the room, so laptops were connected to one of the major geeks who acted as a relay and firewall, connecting through the one telephone line with a modem. This allowed everybody to send very small amounts of information and pick up the odd picture of what was going on. Then, one other person went out down to a local store and

bought a radio. I think the Internet demonstrated its worth because we had a chat system running with the folks back at MIT who were taking the calls from relatives. This chat screen was projected into the meeting room, though we were aware that Internet connectivity was very fragile. The Internet is famous for being a net, because if you cut one piece of it there are so many other routes round. However, in practice, because we base it all on the telephone infrastructure, we have made it fairly tree-orientated – there are still single points of failure.

For example, I have various cables coming into my house, and several of them are capable of taking Internet traffic. But I don't have a little box which will use the best one, or the cheapest one, at a given time. If a tree falls across one wire, I do not find that it slowly degrades – somebody has to go and put the wire back on. If the link between my cable company and MIT breaks down, there are all kinds of cables which link them up indirectly to MIT but they have not made the system so that it actually will automatically respond. So in fact, it relies on people. Yet I feel, in fact, we could make it very much more resilient. It is really important to have the Internet connected, available, always on – for many things such as e-voting, you do not need broadband, you just need the cable always connected. The problem with dial-up is not, primarily, that it is very slow. It's that you have to dial. What I would like to see Stuart Hill do is to get every house in the UK connected permanently. I am not worried about whether they can watch videos. I would just like to be able to press a button on the screen on the fridge and bring up the school menu for today – to know whether I have to make a decision about whether I am going to send the kids with money or food – and without line crackling noises!

I'd like you to help me with a problem, because I've spent ten years thinking about the social effects of the Web in various ways – the next piece of technology. It's something I call the Semantic Web. Let me explain what it's going to be and then maybe you can try to tell me what the problems will be or what the advantages will be. Before the Web in 1989, if you used computer documentation systems and if you were very lucky you could use the same PC to dial into one system and go through the library access system, Telnet and various different programs and eventually you would get the gem of information. You would copy it into the paste buffer and go into a totally different system using different programs, completely different knowledge of how to do it, find a place where you wanted to enter the data and paste it in and save in whatever way. Very often you couldn't even do that because the data formats were completely incompatible.

So now with the Net we've got, wonder of wonders, an abstract space in which all this information seems to be the same; it seems very consistent if you can use the same program. You don't even have to worry about what program you're really using – you have the impression that you're just in a space of information. In fact, it is still all stored on weird machines and weird systems. Those strange Manu frames are all still there running strange programs but they've got this little layer of software which maps them into the general Web space. This is wonderful for human-readable documents. But it's not there for data – you don't have to think of a big database. Just think of the data in your life; if you have a pocket gadget that holds your calendar, your appointments – that is data, it has got things like times, and it is really fairly organized data.

You may have a desktop machine that runs a different sort of program but uses the same sort of personal information management that you may have bought from a different supplier. If you take these two things and you want to connect them together the state-of-the-art dictum is that you have to buy third-party software from somebody else who makes a living selling software. It's rather unsatisfactory.

Imagine that you were going to a meeting and you found a web page describing this meeting and you thought 'I want to go to that meeting'. At that point, your agenda really needs to know when you're going to be there. You might have in your car or pocket a GPS device that would actually help you get there – if it knew where it was and at what time. So for that day it would be good if the information which is on the website were in your address book. You'd cut and paste it from the Web. You'd get out one gadget and you'd copy it into that; you'd have to fiddle with the dials on the GPS to set the latitude and longitude to where you're going and then cut and paste some of the information about the meeting. Once you'd done that, none of the hypertext links would work so you would have to save the web page somewhere else on your desktop in case you wanted to follow any of the links.

This is ridiculous. When it comes to the data in our lives, we are pre-Web. What you ought to say is, if you understand what that information means, all kinds of programs will be available; your telephone answering machine will be able to say that you're not there, knowing that you're several hundred miles away, and the possibility of connecting different applications becomes huge. There is a huge amount of money being spent in industry for integration of enterprise applications, taking the fact that the inventory system has a database with some information and accounting software has a database with other information – in fact

there ought to be an overlap but there isn't. So what happens is that you call in a consultant, who does this third-party business of analysing how one company has stored the information and charges you a hefty fee for specialist software just so that you can integrate your enterprise applications.

If you take the possibility of taking this onto the Web, so that when there's a site that has the weather for example, there's a huge amount of information about the weather out there and a huge amount of information about stock prices. Suppose I asked the simple question; could I write a program that will use this information to find out whether the stock price of a company is related to the weather changes at its home base? It would take forever, of course. It would be horrific because the program has to pretend to be a person and go to the website, read the web page, strip off all the pretty pictures and guess that the answer was in the third column down in the table. You have to scrape the data out of these web pages that are intended for people – this is ridiculous!

There are clearly defined relationships between these things. There are mathematical relationships and we should make languages that are mathematical. Without getting too carried away about it, this is really exciting. Thinking as a frustrated software engineer, which is what I was ten years ago, you get the impression that if we actually solve this problem then things could be very different.

So how is it actually going to change the world? Well, for example, if all the financial information of companies is available in a way that could be treated, then any student could sit down and write a program which would, for example, look for possible signs of financial instability. The Savings and Loan disaster happened because they said people haven't really looked at these Savings and Loans institutions sufficiently well. Maybe the data was available, maybe it was pinned on a tree in a forest somewhere, but maybe it was actually publicly available. Now if we start to get this information available on the Web, maybe there will be this informed electorate – they will be able to write programs and they will be able to analyse and use more and more powerful tools.

Now this is a bit of a shift as you can imagine. It's really not very exciting to imagine what happens when you have two Semantic Web documents with data and a link between them. It's just as unexciting as when I showed people the first two web pages. What you have to do is imagine what would happen if there were billions and billions of documents out there and in particular you have the option of making a hypertext link point, in

principle, to anything. Same thing with the Semantic Web – when you realize that what this person means by postal code is exactly what that person means by zip code, suddenly two huge pieces of data can be correlated. There are possibilities for huge, very easy abuses of personal privacy here. Possibility perhaps for doing fascinating new scientific research by correlating different pieces of things. Possibility of building in little gadgets, little robots, programs which just wander around the Semantic Web looking for correlations just in case they find things interesting.

When the Web started, one of the things we knew was that it had to have some scale and you'd never be able to make a list of everything that was on the Web. We were proved wrong. What we hadn't realised was yes, the Web was going to grow ridiculously fast, but so would search engines. Combined with a few interesting mathematical results, which make things like Google work in an uncannily effective way, it has really changed the way people use the Web and the way in which the Web can be used.

What will be the equivalent thing for the Semantic Web? What are people going to build on top of that? Will it be that artificial intelligence suddenly comes into its own because there will be a whole lot of stuff out there which is machine-processable and which doesn't need natural language interface.

How will we be able to use this ability to process large amounts of data? It's not something that will naturally hit people like the browsers. I won't be able to take a Semantic Web browser and give somebody that great 'aha' moment by suddenly letting them browse around for a little bit. But on the other hand, being able to access data that computers can help us analyse, may in fact have more dramatic consequences in the long run.

I want the Web to be fair. I think society should be fractal; the one optimistic thought I have is that when I look at people I think that most people do actually put their marbles fairly evenly into all kinds of different pots. There must be something that drives them not to always spend time at one particular scale. There must be something that evolution has given us so that we're naturally disposed to behave such that society becomes fractal and everything will be all right – and so I leave you on that optimistic note.

DISCUSSION:

Andrew Graham

Oxford University, and Oxford Internet Institute:

The first thing is to pick up the challenge on the 'semantic front'. Obviously, I strongly support it. But I am sure that Tim Berners-Lee understands that conceptually this is mind-bogglingly complicated, and that one of the mistakes to avoid is the notion that somehow there would always be that explanation we could find in the brain. The point about 'the social' is that we have constructs that do not have unique identifiers. Take the postcode example, that one person lives in one place, so the postcode refers to that place. If you take a concept like money, it could be Francs, Deutschmarks, cigarettes, it has a social dimension, it is constructed socially. So, in the process of trying out this mapping, this translation, a lot of discussion with philosophers is going to be needed because there are not unique identifiers, you cannot track them down. Second, I am incredibly supportive of the notion that democracy is not just e-voting and that the whole point of these new technologies is to communicate – not just to have one person saying something (and actually it is quite interesting that we are having this debate here which is where the University's Parliament meets, and Paul Flather, who set this whole meeting up, reversed the direction of the way the seats face so that is nice and symbolic).

Tim Berners Lee

3Com Founder's Chair at the Massachusetts Institute for Technology and inventor of the World Wide Web:

In the semantic way of thinking, I do not plan that it should have a unique identifier. In fact the way the things can be built is not from trying to make an ontology of all things, there will be many systems. We have tried to do that in the past but of course it fell to pieces because everyone has their own system, and the important thing about the Web is that it's a grassroots thing, where really money is maybe defined at the end of the day as a useful term because it will make a machine turn. The semantic way will work by taking this rather prosaic, mechanical, definition of how things will actually work. Existing machines allow a company to pay you or make them to deliver to your door and it will connect them with rules. In other words, it will not work by trying to do the philosophical impossible thing of making a universal language they will just allow many

different sub-cultures, in fact to communicate at these boundaries by small scale conventions and I realize that I should have explained it but I did not have time, that I should have thrown that in, but I did not have time.

Bree Jordan

Student:

How are governments, both nationally and internationally, going to respond to the challenge of regulation of the material made available on the net, privacy of the individual, issues of protection of culture, consumerism, and whether third party determinations or the development of filtering technology provides a challenge for democracy, removing the threat of accountability?

Tim Berners-Lee

3Com Founder's Chair at the Massachusetts Institute for Technology and inventor of the World Wide Web:

The suggestion that a third party may be able to gain control of what you have access to against your will is a horrific scenario, and I hope that it won't happen, (though I know certain countries where the Government takes on that role, and makes it illegal for an Internet service provider to allow an international connection, for example excluding naughty pictures. People talk about information overload, but that applies to e-mail, not to the web. When people say I was reading so much junk yesterday, I generally say 'Well why? Where did you follow the links from? If it hurts don't do it.' People have to learn that they don't have to read everything out there. This is something that we should teach our kids, and our kids will probably teach us. I think that parents do have to protect their children but I don't think that companies need to protect grown-ups. Again the concept of fraud is fairly international, subject to universal jurisdiction. If you do something fraudulent, it should not really matter where you are or where the person you damaged is. So long as you have a choice of which third party you buy a filter from, then I think democracy is not threatened. But there is a serious threat to democracy when the filter is built into a website, a special website from the point of view of the software you are running, because it can be stored on your computer, that is a horror scenario. The search engine determines where you buy your shoes, your political views.

That is the intensive political issue in the whole Microsoft cases under review, which democracy must resolve and very urgently.

Jonathan Briggs
Kingston University:

The important point is that it is not necessarily going to be right, it is going to be better than what we have at the moment and I think one of the things that's been truly democratising about the web is its constant evolution and change. It is the fact that this very, very, very, simple publishing idea gave all of us the opportunity to actually publish things. Let us try to tag our pages in such a way that we can spot interesting things on those pages and if Tim or other people come up with a list of them, then many of us can begin to implement them immediately.

Liesbeth Evers
Network News:

What is the implication for storage because storage is already a necessity, and if you have programs collecting data and then generating new data, I was wondering where we are going to put all that data?

Tim Berners-Lee
3Com Founder's Chair at the Massachusetts Institute for Technology and inventor of the World Wide Web:

A good program will generate less data than you think. It will run summaries and analysis, and results will be relatively small. You don't have to store it yourself. Secondary data will only have to be stored and served where it is demonstrably more interesting than the primary data.

Caspar Bowden
Foundation for Information Policy Research:

One of the most interesting projects that I've seen WC3 attempt is that of a browser which is also a powerful but easy to use editor. I think it was part of your original vision that the web would only realise its democratic potential when you did not have such a segregation between those who know how to use the tools to edit and produce a page, but you want to get to a situation where anyone who can browse the web can also cut and paste and dynamically re-create their own information. How do we get there, and is the Semantic Web going to make it harder?

Tim Berners-Lee
3Com Founder's Chair at the Massachusetts Institute for Technology and inventor of the World Wide Web:

I don't think the Semantic Web going to make it more difficult. I think some users will produce the right programmes and get in there at the deep level. The benefit of the Semantic Web is that information produced will be integratable with data from other applications. How do we get there? Well, originally we thought we would use off-the-shelf software. Now we think you have to give people the ability to create a new document, and to select immediately who has access to it, and we have not even got these tools. For example the system itself should think of its URL, but you should say the socially interesting things about it, to do with quality, travel, safety and access, and you need to be able to change these things. At the moment we are trying to put adaptation in it, so when you are reading a document you can store a survey of comments about it. This will be with a 'logical language', and you can start to involve keys in it, and you can start to 'boot strap' a whole web of trust. So, the Semantic Web should give us the tools for what I call a 'web of trust', which is really the ability to write down for the machine the rules it should use to be responsible, act on your behalf responsibly.

Robert Marcus
Chat Moderators:

Democracy is about people being heard by government and policy makers and as Tim Berners-Lee said the web seems to be particularly good at sharing and developing in the evolution of ideas. I wonder what operations do exist, and should exist, so that people's views are put up for discussion in democratic orientated fora. For many people, how we want to be heard is perhaps more important than how we want to be governed.

Tim Berners-Lee

3Com Founder's Chair at the Massachusetts Institute for Technology and inventor of the World Wide Web:

I want to support the question. The first question I wrote down was for Stuart Hill who talked of politically accountable enterprises. How do you make a politically accountable enterprise where you have a lot of people with views and somebody who has got the switch to make the decision, I think the whole problem of democracy depends on how you answer that question.

Stuart Hill

BT Stepchange Director:

It is more a cultural issue rather than technology. But I think you will find because of technology, and because of a desire from this Government to be much more citizen-centric, small things will start to make these cultural changes, whether it is tax on-line, whether it is dealing with your GP on-line, whether it is creating a transactional based interaction which allows you to get something quickly from Government. I hope that we will get to the point where if you want to be a citizen engaged with a local council, you will feel comfortable that they will receive your needs and wishes.

Stephen Coleman

Director, Hansard Society E-Democracy Programme:

We have run a number of consultations for the UK Parliament on how you make such matters credible. You do not tell people lies about what you are doing. You make very clear what their expectations are and can be. We do not do what the Government has done in the past, which is to say we want to hear what you think and the summary of everything you say is going directly to the Prime Minister at No. 10 Downing Street. People do not believe that. You need to ask some serious questions about what government is for, and particularly what representatives are for and how they learn to be responsive in this new age, just as they learnt to be responsive in the television age and print age. You also have to ask what are citizens for? We know what consumers are for: to spend money to get fat, to eat, to fart, and eventually to explode. What we do not know is what you actually do in order to be a citizen, we don't know where the place is to conduct democratic citizenship, we do not know what democratic citizenship should look like. When people become good democratic citizens, we tend to call them busybodies, interferers, protestors, nuisances. We have not worked out a respectable model of strong civic engagement which is democratically influential and well-organized.

AFTERNOON SESSION:

Paul Flather

Secretary-General of the Europaeum:

Ladies and gentlemen, may I welcome you back and pass you over to the Vice-Chancellor, who I know, having worked closely with him, is a very diligent and efficient user of the World Wide Web.

Dr Colin Lucas

Vice-Chancellor, University of Oxford:

Thank you, welcome to this afternoon's session in what promises to be a continually interesting event. The first panel discussion is about participation, new times for participation. We have three panellists each of whom is going to give a small presentation, up here, you are going to do what you will with them.

SESSION III: PANEL DISCUSSION: NEW TIMES FOR PARTICIPATION

Dr Julia Glidden *Vice-President, election.com*

As another representative of business, I noted some very appropriate comments about foisting technology on democracy or allowing technology to drive the democratic process which is even more dangerous. I want to deal with these issues head on by talking about today's theme, participation, through some first-hand experience. I have been lucky enough to work for a company that has been at the forefront of much of what has been happening in the voting arena. I will talk about this from a policy rather than a technical perspective, and the examples I will talk about are primarily Arizona, which was the world's first legally binding political election using the Internet. It was a Primary race between Bill Bradley and Al Gore; and ICAN, an election to globalize the membership of ICAN which assigns names and numbers on the Internet and had been surprisingly criticized for being global only in name. The UK is not new to Internet voting. In fact, in many ways, it too has been at the forefront of Internet voting. I had the pleasure of working with Derek Wyatt MP in Sittingbourne and Sheppey, to do a first youth vote during the US presidential elections. (The result was the same as in the US, Bush won by the narrowest of margins.) The Labour Party has been using Internet voting for its own internal elections. The National Union of Teachers has begun to use Internet voting for its non-statutory ballots.

In Arizona Internet voting really took the world by storm, more particularly the concept of 'voting in your pyjamas' as one journalist famously put it. It produced a stupendous increase in voter participation by 600 per cent across the board. More importantly, and the more relevant policy question, concerns the communities affected. A 600 per cent increase, say, in a wealthy retirement centre, which is a predominant sector of the population in Arizona, clearly has very different impact from a 200 per cent increase among the socially excluded. We are very happy to say that we saw an 800 per cent and 1200 per cent increase respectively among some of the most minority concentrated areas in the state. So that is the good news, and I can equally roll out all the great statistics about ICAN and global participation. So, as the representative of business, I am supposed to say the web is the answer, a panacea, all of our problems are solved and it will be great for business, wouldn't it? But it is not the answer, it is simply a tool, a

product. The real success around ICAN, and around Arizona, was not in the successful deployment of technology (those are issues that can be solved though of course we had glitches as you always have bumps in the road with a new product). But what were the real lessons learned regarding participation? People want to vote in their own time, and on their own terms – that was the lesson. They want to vote via the Internet to get over social exclusion issues. We allow people to vote by post yet the results were phenomenal: 80 per cent of the population chose to vote remotely, only 20 per cent actually went to the polls. Of those who voted remotely, 50 per cent voted over the Internet, and 50 per cent by post. In the UK, you are very advanced with telephone voting and postal ballots increase participation. That is a given.

So what are the real questions that we need to be thinking about as we talk about technology and democracy? Is it how do we increase participation? Well, we know telephone voting and postal balloting will increase participation. Is the question how do we tap in to the tremendous possibilities for civic participation, engagement in the democratic process, community forming, collaborative debate, that the Internet heralds? This is a question about vision. What do you believe will be the best delivery mechanism, not just today but five, ten, years from now? Do you really believe that it will be postal ballots? If you do, there is no need to waste government money funding Internet voting pilots. If, on the other hand, you believe that new technology has a way, not just to drive numbers up, but to really re-engage the democratic process, then it is incumbent to start experimenting and conducting pilots that test the technology to increase participation.

Now I come back to the idea I would really like to leave everyone with. In Arizona, that primary election worked. To watch a 90-year old man go upstairs three times to get his pin number because he was going to cast his vote for the first time and use the Internet for the first time since he had been in his nursing home, it was goose-pimple, amazing, or the grandmother that said: 'I did it, I did it. I'm going to tell my kids, I did it'. It worked because, yes, we brought the polls to the people. But, more importantly, we brought technology to the people. We combined the pilots with a tremendous community out-reach programme. We worked with grass-root activists. We sent out what was

called the digital hit squad, rainbow coalition activists that went into the communities and saw this as a chance to bring the polls to the people, to bring technology to the people, to engage communities like the elderly that have never used the Web before, to use this technology for the first time as a step not just to participate in the democratic process but in the wider global phenomenon of the World Wide Web. So, what I really would like to end on today is a plea. Do not just think technology is 'the' issue. Do not forget the people factor, and when you look at funding, don't think that simply paying a company like mine a great deal of money to run a flawless election is the solution. Really look at the public affairs firms, the communications firms, the community groups, and engage them in the process and you will have a successful pilot. Spend all your money on a company like mine, and I can guarantee you participation will not go up because it is a new technology and people will go to the forums that they are comfortable with, which is paper and postal.

Mr Predrag Vostinic
*Co-ordinator OneWorld International,
Southeast Europe Initiative, former Radio
B92 correspondent*

When the war began in the former Yugoslavia, the most important military targets were telecommunications facilities and radio and television transmitters. Telephone lines were, as a rule, cut off between the parties in the conflict, imposing an information blockade that opened a space for manipulation, i.e. establishing the 'monopoly on truth'. This was an attack on objectivity. The lack of reliable information on the most interesting events and developments – the elimination of the senses of sight and hearing, made it more difficult to motivate the public for anti-war campaigns.

Initially, Radio B92 and Studio 99 from Sarajevo produced joint radio programmes that provided authentic reports from Sarajevo. This provoked strong emotions among listeners and made it relatively easy, at that time, to organize anti-war campaigns and projects (the Centre for Anti-War Actions, Vreme news magazine and B92 managed to organize, within one hour, demonstrations against the bombing of Sarajevo that brought thousands of protesters into the streets). Soon after this the telephone lines were cut, and we were reduced to news agency reports that had to be confirmed and reconfirmed from several sources. Links to Sarajevo had to be routed through Paris, Vienna or Milan, meaning that a single interview would cost as much as the monthly salary of the head of our news department. The only possible means of communication with people from regions stricken by war was through amateur radio operators. A large

number of these offered their services in establishing contacts between separated family members and friends. This was tolerated by the authorities, being seen as humanitarian work, although still subject to a degree of restriction and repression.

This network of amateur radio operators could be seen as a kind of mediaeval Internet. The code of behaviour of amateur operators did not permit them to use their equipment for political activities, including the communication of information that might be used by the media. There were, however, cases of manipulation and false information, as these amateur radio operators were not trained journalists; -most of them were people with no skills in the provision of objective information and, moreover, some of them had political agendas of their own.

It had become urgent to find a solution to this problem. That alternative was clearly the Internet, but there were no Internet service providers in the country. Once more we were forced to go through the painstaking process of establishing a technological infrastructure at a broader level to allow us to take advantage of the Internet (the process has been similar in complexity to both our struggle for freedom of speech and our efforts to adhere to professional journalism).

There were only two other options – either to wait for someone else to establish the first Internet service provider in the country, or to allow the authorities to impose their own monopoly on even this completely new medium. Neither of these options were satisfactory. Thus, thanks to a Dutch Internet service provider, XS4ALL and the Open Society Foundation, B92 became Yugoslavia's first Internet service provider. Because of its small capacity our Internet division has never operated commercially – it serves as the technological base for implementing a series of non-profit projects and interconnecting the independent media and non-governmental organizations. The bottom line was that we established a new means of communication and pre-empted the establishment of the regime monopoly over this medium.

OpenNet gradually became something that Radio B92 had already been for some time – a medium for minorities, the non-governmental sector, progressive groups and individuals, alternative artists and anti-war activists. Radio B92 itself began using the Internet as an entirely new medium. A news service was established, with our information being distributed throughout the world via e-mail. News bulletins were now actually posted on the Internet – a completely new departure. In addition, reports on human rights records and freedoms in the country were compiled by B92 and distributed Worldwide.

Soon all of B92's activities were replicated on the Internet:

- ❑ The radio programme is broadcast (webcast) in real time
- ❑ The magazines Rec (Word), ProFemina and Media were among the first electronic magazines in eastern Europe and were available to potential readers worldwide, who soon took advantage of the interactive aspects of the medium
- ❑ Our cultural centre, Cinema Rex, is establishing the Cyber Rex project that has opened a completely new domain for artists to express themselves and implement creative projects
- ❑ The publishing division now publishes in electronic form on the Internet, creating a virtual library with books and articles available to all; productions of the documentary film and television division have been published on the Internet
- ❑ Daily news in English, distributed via the Internet in RealAudio format is regularly re-broadcast by international radio stations.

The regime falsified local election results at the end of 1996. Democratic opposition parties, united at the time in the Zajedno Coalition, spontaneously resisted this move by the authorities. Soon the students joined, and they organized daily demonstrations, which were to last for almost four months, not only in Belgrade but in the greater part of Serbia. Radio B92 and Radio Indeks were the basic source of information for most Belgraders; apart from announcements and reporting of demonstrations there were also live coverage of the rallies and live phone-ins from Belgrade and the rest of the country. This came in for criticism from opposition leaders, concerned that people were staying at home listening to their radios instead of attending the rallies. In late November Radio B92's signal began to constantly decline in strength.

Because of the reliability of B92's information, a large number of foreign journalists relied on our services, but on this occasion B92 itself became the news, as its signal was being jammed and was shortly to be taken off the air. B92's journalists continued to send out reports daily to a large number of radio stations in Yugoslavia and abroad. Meanwhile B92 used the Internet to distribute news and information on the most recent developments in Yugoslavia through constantly updated mailing lists and web pages.

The authorities began to deploy the police force more extensively and it was important that this information reached as many people as possible. For all these reasons we decided to distribute our news packages free of charge and also stepped up our news services in both Serbian and English. As these reports were designed to

look like newsletters if printed, it was possible to distribute them in that form, which served the purpose of penetrating the media blockade between Belgrade and towns outside the capital. These bulletins were also being read aloud in the squares of provincial towns, as well as being posted on walls and billboards as newspapers. In places without Internet access, these bulletins were printed abroad and returned by fax into the country where they were copied and further distributed by radio, Internet, fax, photocopier, hand, and reading aloud). Here modern technology was combined with the traditional, along with subversive methods of distribution.

OpenNet gradually became a service for the large-scale distribution of information on both the civil and student protests. The first positive international responses to the demonstrations came largely because of the Internet. The students also began to use the Internet through the Academic Network to report on the latest developments in the demonstrations. People abroad began to express solidarity, which charged the protesters with new and fresh energy. Creative ideas were exchanged via the Internet and were soon implemented on the streets, transforming the demonstrations into genuine media events. The use of the Internet involved the technical faculties of the University of Belgrade to a large extent; they became an important part of the process of creatively shaping the demonstrations and linking the rest of the world.

The New York Times, the Washington Post, and the LA Times all reported that the Internet had saved the demonstrations in Serbia. A new mechanism for resisting repression had been found and used successfully.

The widespread and versatile use of the Internet in a way that liberates certain segments of society – by opening up the tightly sealed space for communication and eliminating communication restrictions -has changed the Church's stance on the Internet. The isolated Kosovo monastery of Visoki Decani has, thanks to Abbot Sava, become a true information centre, disseminating information on events occurring in that isolated territory to which war has restricted physical access. Apart from information giving another perspective on the reality of the region, Decani broadcasts the desire of part of the Serbian population to be involved in the peace process and the message of genuine opposition to the behaviour of state agencies. It has also produced proposals for genuine peace processes, statistics on the number of Serb refugees and publicized the need for humanitarian aid.

On many occasions the Internet has been the only way in which the monastic community and Serbs in the region have been able to obtain information. Thanks to Father Sava and his use of the Internet to promote a different concept of peace and democracy, the stereotype of a Serb people united in mischief has been considerably weakened. The Visoki Decani monastery has virtually become a news agency, providing reliable information and opinions that deserve to be heard and analysed. A number of international news organizations, including the New York Times, have acknowledged the importance of Father Sava's work. Thanks also to Father Sava, the dogmatic view of the Internet is changing daily within the church. The celebration of the Feast of St Sava (the founder and patron saint of education in Serbia) was last year broadcast live on the Internet for the first time, as well as being carried on Radio B92 and ANEM via satellite with the help of RealAudio and Real Video. Thanks to this kind of use of the Internet, even the fanatics have been forced to change their views and subsequently their behaviour.

But Radio B92 has also established the strongest e-network of its own; it is the network of correspondents. In the last days of the former Serbian regime it was the only network that had been successful. It worked only through the Internet; everything that happened in Serbia in these times was seen by these correspondents, exchanged and distributed through the Internet. Every journalist or correspondent needed only a phone line to access the Internet and it was impossible for the regime to cut it all. After several days of fighting for the truth everybody knew who won the elections. The Internet won again!

Some segments of society are resistant to new technologies, usually because of the lack of modern education, the prevalence of dogmatic ideas and the desire for self-isolation. Every non-democratic society strives to block the flow of new ideas. The Internet is an anathema to such efforts.

In the late nineteenth century, when the first railway in Serbia was being planned, resistance to this innovation was based on the argument that a Serbia crossed by railways would be easy prey for various international influences. Similar arguments are now being heard against the use of new technologies and the Internet in some conservative parts of Yugoslav society. Despite this, Serbia now has 52 IT providers, a government-funded Agency for the Development of the Internet and an increasing number of people who use the Internet as a main source of information.

The Internet in Serbia is not a virtual but the real world.

Professor Stephen Woolgar *Director, ESRC Virtual Society? research programme*

I wish I could experience goose-pimple amazing, but I fear I am much more of a sceptic. I call it positive scepticism, but it is still pretty uncomfortable. I was asked to distil some results from a large research programme which is called the Virtual Society research programme, I want to do that briefly, and I want to consider how some of the results from the programme might help us with this particular question of participation.

The vision of a 'virtual society' is of course the idea that we can relate to one another, communicate, organize ourselves, in fundamentally different ways as a result of the new technologies, mediated by computer networks and so on. And these new relationships are virtual in the sense that they do not depend so much on face-to-face physically situated interaction. Is this the case? Is it possible? Are we moving that way? What are the attendant significant changes in ideas that we all cherish about identity, inclusion, cohesion, social control, trust, and so on? You see it is a modest little programme! What new forms of sociality are possible? and in reviewing this evidence one of the curiosities, which I think is relevant for this discussion, is that it produces some very bizarre ideas about what society is, and what it actually entails and some very partial visions of how it works and so on, which are parallel to the discussions about democracy and participation which I will come back to.

Some features of the research very, very, briefly. We have rather little patience for the technologically deterministic views about impact. We are not in favour of the idea that technologies may have inherent properties that by themselves facilitate particular forms of social organization. The focus is very much on the actual everyday usage and the experience of these technologies. You know the fact that the damn modem will not work again and it is thoroughly irritating, and having to contrast that with the vision of how we are in this brave new, virtual, world at the same time. The research methods are bottom-up, experientially based on the ground, ethnographic in spirit, and this is deliberately meant to contrast with grand theorizing, synoptic, top-down, summarizing narratives, which are the love of the media, the supply-side industries, certain kinds of consultancy agencies, certain arms of Government in unguided moments.

These questions do beg a lot of the answers. If you take it head on: is the Internet changing our lives? You have got to do a lot of unpacking. Excuse me, whose lives are we talking about? The big change in what? and so on.

We tend to avoid the big questions, to focus on the ground, on the relationship between what goes on 'on-line' and 'off-line'. I will now summarize the results of the 5-year, £3.5 million, research programme in two minutes. You will be pleased to know that what has emerged are five Rules of virtuality, and I will give you three now, intriguingly counterintuitive.

The first rule of virtuality is that the uptake and use of the new technologies depends crucially on social context. Implementation tends to work best where it is 'parasitic' upon existing social structures and social organizations. That is why kiosks in city centres do not work. There is surprising evidence of extensive non and former use of the Internet. Surveys have revealed large numbers off drop-offs and former users. Particularly surprising is that the constituency dropping off, and no longer using are teenagers. What do these kinds of findings mean for participation? Well, participation is not going to be constant. Participation at any one time does not guarantee it will last: it will depend, crucially, on the social context, and how that is changing.

The second rule is that virtual technologies supplement rather than substitute for real activities, despite all that we are told by those enthusiastic about the virtual technology. They do not do away with the ways that they have been doing things for quite a long time. The paperless office is surely the icon of this argument: guess what, we do not have a paperless office. Guess what, we send loads of e-mails and we communicate by paper, by phone, and by fax all at the same time. This gives rise to other interesting new forms of communication: colleagues wander down the corridors of their buildings to say: 'I've just sent you an e-mail'. The study (and this is all UK data by the way) of cyber cafes and telecottages reveals, very nicely, that many users of those, reportedly, 'new' access points, are already hooked up at home. So these are new access points for the new virtual activity. The Internet is a tool, a supplementary aid, to existing structures of participation.

The third rule is more real. Evidence from a whole series of different sorts of studies, shows, that counter-intuitive results are likely. For example, that teleworkers in one instance ended up travelling more. How on earth did they end up travelling more? Well, because new technologies very efficiently and quickly led to contacts with many more prospective clients. They used to travel by car to meet the new clients, and did much more travelling as a result of becoming teleworkers. It has been said that there has been large increase in trans-continental air travel, (at least until two weeks ago), driven by e-mail. E-mail communication has driven the tendency to go meet your colleagues, clients, and so

on, who work a long distance away. It has been found that museums on-line led to more people visiting actual museums. Various similar instances like these suggest to us that there are some very very interesting cross-over effects between the new virtual technologies and the real activities that they supposedly displace. These cross-over effects may be a positive or negative influence on participation.

I now want to comment, partly based on what has already been said today, about the rather idealised versions of democratic process which tend to feature in discussions on the Internet. One example that came to my attention was some recent postings on a discussion list called Cyberspace and Society under the heading objections to political observations. The contention was that the list perhaps should not be used to discuss the events of September 11th, following a complaint by an Israeli sociologist about the postings being put up in support of terrorist Middle East regimes and so on, undermining the proper purpose of the list. After a long long discussion, the majority of opinion was that everyone is entitled to their say, and that the list is important because it provides a space in which everyone can participate. The one key principle that everyone agreed upon (perhaps except the Israeli sociologist) was that no one should be barred from contributing. But I was left feeling that this was a slightly sad picture of disengaged and somewhat impotent participants. The fact that they were able to post these messages on the web was what counted for them as 'participation'. But what kind of participation is this? This reminds me of the enthusiasm of one of my students when an on-line community was formed around a particular academic debate: I pointed out that it was a rather odd community, because as community members what we did routinely was delete the messages as we read them, and they went into the trash box immediately. What kind of community activity exactly were we engaged in? If they think they are all participants, I think there is a real danger that they are underrating the potential, or misleading themselves. It seems to me that, if anything, where this leads is that cyberspace discussion lists are the new opium of the people. It is precisely minimal participation, which is being allowed. Democracy in action is hugely different.

I can take an example from my experience of this University, which Paul Flather has told us is one of the longest running democratic institutions, but of course this example is pretty much the same as we experience in other organizations. If I want to participate effectively in a decision or discussion within the University, I know I need to send e-mails, to lobby key members of the committee in person and on the phone, to download information from websites, and send it to other

members of the Committee. I have to phone the Head of Division and plead with him; I need to send a fax to the European bureaucrat to get him to him to fax information to the University Offices urgently; I have to be nice to the secretary of the Committee in order to get the item on the agenda way after the deadline, and so on and so on and so on. You will not be surprised by this scandalous description of democracy in action. My point is this: here we have a whole mass of intersecting social and organisational structures which I have to make my way through, and I need to do this, please note, using a whole lot of different communications technologies, some complementary, some not. By contrast it seems to me certain visions of participation tend to fetishise just one particular activity or Internet-related activity which then comes to stand for democracy in its entirety. So, in discussion lists, you find we have suddenly reverted to the agora of classical antiquity as the modern model of effective participation. Every posting comes to have equal value in the idealised flat landscape of cyberspace. In Stuart Hill's vision, the exchange with the robotic Tony Blair hologram comes to serve as the singular uni-dimensional icon of democratic participation.

Let me conclude. Participation, it seems to me, is always situated both physically and socially. To understand prospects for increased participation, we have to look at, and take into account, the relationships between 'on-line' and 'off-line' activity. We need much more realist and down-to-earth ideas about what is involved in participation, and in democratic practice, and we need to be much more critical of the partial versions of participation and democracy that seem to be to get smuggled into the discussion of technological impacts. I cannot help thinking I probably would not get what I wanted from the virtual Tony Blair. You know I'll be sitting there, thinking this is not the real Tony Blair and he would know that he was not the real Tony Blair sitting in front of me. But then I am wondering whether I would almost certainly not get what I wanted from the real Tony Blair either.



DISCUSSION:

Dr Colin Lucas

Vice-Chancellor, University of Oxford:

We have had three snapshots, three visions: one of a process of democracy taking place in a different way, one of direct democracy in action, making its way through the obstacles of society, and then are we asking is this an alternative, or is it enhancement or is it a distraction? We have got about 10 to 15 minutes for discussion and I will direct the traffic.

Caspar Bowden

Foundation for Information Policy Research:

The National Science Foundation recently published a study which addressed the whole issue of electronic voting and it drew a distinction between remote voting, (where for example over the Internet somebody can type in a PIN or some other means of authenticating themselves) and electronic voting in general which can be confined to voting through kiosks in supermarkets and other places where the physical security of the voting device can be kept in check. Their recommendation was that remote Internet voting system poses significant risk and should not be used in public elections until substantial technical and social science issues are addressed. So do you think to some extent that you have got away with it in Arizona? Are there systemic new risks to Internet voting remotely which have not really been solved? I suggest at the moment the problems are pretty much insoluble because we have no way of making a PC and a browser secure against computer viruses, or against insiders who might wish to manipulate the result of the election, for example in our system by manipulating the results in a few marginal seats.

Julia Glidden

Vice-President, election.com:

Internet voting is a technology which is here. It is not a perfect technology. On the one hand, I held my breath through the four days of the election, sure. Phew! On the other hand, saying that because something is imperfect, and therefore shutting down any experimentation and testing is a very irresponsible, a very status quo way, of approaching the problem. I do not share your views that the problems are insoluble. I genuinely do believe that the application to technology to the voting process and Internet voting is something that will come. And I do believe that the challenge for everyone in this room is to make sure that it comes in a responsible way that guarantees the sanctity of the vote.

Now just to go back to the question about remote Internet voting versus polling place Internet voting. Polling place Internet voting, I think from the discussions we have had today, has no real application if we are talking about participation. It is simply changing a form. People are not going to vote in controlled kiosks, I do not really believe. I do not go to Sainsbury's to vote I go to buy groceries, and that is not voting in my own time on my own terms. It does however rapidly increase the efficiency of the voting process and, you can argue, it does increase the accuracy of the voting process. I have served as an Election Monitor, I have seen paper votes painstakingly counted and I have seen them painstakingly manipulated from within. But to say that it does not solve the participation problem, does not mean it does not have an application.

Stephen Woolgar

Director, ESRC Virtual Society? research programme:

I just would like to draw the distinction that people will obviously want remote voting but it does not have to be remote Internet voting. It may be that the Internet is fundamentally a technology that cannot be secured at the present time but there are plenty of other ways of giving people remote voting securely.

Paul Whitehouse

ex-Chief Constable, Sussex Police:

From the examples given, apparently Professor Woolgar indicated there had been an increase of people that are selling things in real commuting. Of course that is to be expected. What about all the people who telecommute and who do not sell, who are now able to work at home when they could not get to work? I am left thinking that part of the research was incomplete? Was it being conducted from a standpoint that ensured that certain results were achieved?

Stephen Woolgar

Director, ESRC Virtual Society? research programme:

Well that's a very tough accusation. Let me say there my point is that this research is counterintuitive. The best example of this, I experienced in an interview on Radio Scotland, who, when I told them about the survey material on drop-outs, said: 'So, you are saying Steve, there is no point in anyone buying a computer any more?' It gets polarised whatever you say or do.

A number of outcomes are counterintuitive but can be understood as being very positive about the use of Internet technologies and participation. For example, for many years we have been told, particularly by American social scientists, that the use of the Internet can lead to isolation, depression and M.E, the death of civic society and so forth. The psychologists in our programme found precisely the opposite in a very focused study, the more that you withdraw those forms of communication which we are used to, the more comfortable people feel. So, the suggestion is that there is a form of sociality which if you make it less like face-to-face interaction and communication we are used to, will make people participate and be involved more. I guess more research is needed, but I picked out these results because I think they make us pause to think. Yes, it is spotty, but they are deliberately striking initial results I think.

Beth Porter

Women's Forum, Bristol City Council:

I do agree with Julia that some form of e-voting is going to come pretty soon, if only because the generation that is growing up now is going to demand it. But it has to be based on informed opinion, not on the kind of instant polls that channels are offering now with the same kind of pop quizzes on radio phone-ins. I want to tell you about SeniorNet, which started in Sweden. A group of elderly women who did not know each other in Stockholm, started e-mailing each other about issues of ageing. There was no one central point of information that they could access before they started, and they found that it grew and grew till they developed something called SeniorNet which is now worldwide. It is a means of exchange, and actually established a community. They were able, by the realisation that they were unified by their common concerns, to actually 'start' participation, and it has developed and evolved so that they now are a government lobby as well as just a coffee club on-line. I think that participation is deeper than you were suggesting.

Stephen Woolgar

Director, ESRC Virtual Society? research programme:

Yes, participation can go in all kinds of directions. One of our studies is looking at the membership of discussion lists on self-help groups on medicine and welfare issues. And you find an enormous amount of participation in those. The question then is what sort of information are they getting to inform themselves better to participate in democracies. One of the interesting things of that particular study, exclusively middleclass UK data again, was that people tutored each other on how to use the information in their next encounter with their bank manager. Those spaces for exchange of information and discussion 'self structure' very, very, quickly. They are not for more than a nano-second open, flat, structures of equal participation and democratic ideal. We need to understand those structures and how they arise, not simply assume that any exchange of information is good enough for participation.

Anne Deighton

Oxford University:

I noted that this morning was a lot about data with very little about knowledge and understanding, and this afternoon it became clear that participation and decision-making requires power, or at least knowing your way round the system – not least in the University. I am still not sure whether the web is an add-on or an alternative. I would like to ask Predrag Vostinic whether the use and uptake of the Internet mechanisms you used post-Milosevic Serbia? Is there still the same vibrancy of the alternative forms of communication that you developed during the war? And I'd also like to ask Professor Woolgar if he thinks there is something qualitatively different between e-mail chat, communication and eyeball-to-eyeball communication.

Rosemary Franklin

University of Cincinnati Academic librarian:

It is fundamental to this whole democratic process that we have to have a better-educated voter population, educated in all of the various aspects of voting, in how policy is made, as well as educated in terms of understanding information.

Rob Marcus**Consultant:**

Does the panel feel that anonymity serves to enhance the democratic process on the Internet, or do we all need PINs etc to participate in the democratic process on the Internet?

Has the fact that democracy in Yugoslavia was helped to come in existence through the Internet meant that the democratic processes are now actually more integrated with the Internet or just as badly as integrated as most of Western Europe?

Predrag Vostinic**Co-ordinator OneWorld International,
Southeast Europe Initiative, former
Radio B92 correspondent:**

As I said we now have a totally new government-funded agency for developing the Internet and new technologies and there are the people interested in new technologies and interested in helping people to get information. I know there are so many problems in Government now with corruptions and criminals. But there is one problem. The former Government didn't do anything on e-government and electronic networking and now the new government has the same problem: they do not have computers and must use faxes, or call them by phone.

The Internet helped the radio and the people to want to know what's going on in Belgrade when several independent media bodies were banned in Serbia, the Internet became primary. The newsletter that we broadcast on the Internet was printed and read aloud on the squares, and put on billboards. That was the way how we communicated with the people.

Stephen Woolgar**Director, ESRC Virtual Society? research
programme:**

I do think there is a major quality of difference between face-to-face and other communication, and the cross-over facts are fascinating. Virtual Rule two was you cannot substitute. So, if you try to give just virtual tutorials and lectures you are heading for trouble, and, more interestingly, if you give lots of virtual seminars people will demand real teaching and what counts as 'real' becomes re-negotiated in that process. My own view is that anonymity would not be necessary unless there are some pre-existing concerns about privacy, and again the UK is unusual in terms of its lack of concerns about privacy among people who use these technologies.

Julia Glidden**Vice-President, election.com:**

There is a real tension here. On the one hand you need the anonymity of the vote, on the other hand you need to ensure that you are who you are and you are the person that is voting. The UK does have a rather distinct system in that you do build an audit trail in, so that if you need to, you can re-construct the vote. I do think anonymity increases participation in terms of voting, because I think there are reasons we have a secret ballot (or we have the closest thing to a secret ballot coupled with auditability). I would say the more interesting way of looking at it is: 'How do you technologically get the balance right between ensuring a person is who they say they are, and at the same time, not being able to broadcast how they vote, or manipulate how they voted?'



SESSION IV: PANEL DISCUSSION: NEW RULES FOR DEMOCRACY

Dr Stephen Coleman
Director, Hansard Society E-Democracy Programme

I think we are all very clear at this point in the day that technologies generate an enormous amount of rhetorical heat, some stifles discussion, damages analysis, it can be hyperbolically utopian, socially myopic, it can be over-sceptical, dystopian and fearful. Yet we all want to take a realistic perspective about where politics stands and democracy fits into this whole equation. So I will express some aspirations about democracy. I am going to talk about what we might call actually existing democracy, the institutions that are here, the people that we have got, the nation states that exist. What do you do with them? What do you expect from them? What do you ask? I am asking three basic things, which I think the Internet can help with. First, I want representatives who can effectively represent me because they know who I am, they know what I want, they have a sense of what it is to be a representative. Secondly, I want representative institutions that do not do everything because I want to have an input into the decision-making, or at least the agenda for decision-making in the society around me. Thirdly, I want politics to be something that seems to have more to do with more people's lives than it does at the moment. I want it to be less freakish, less trainspotterish, less about Westminster gossip, tribalism, I suspect that most people like me are rather bored by all that, they are rather dissatisfied and disaffected, so all the polling evidence tells us.

How can the Internet affect any of those things? There are three transformative qualities that I perceive for the Internet, and forgive me if I am somewhat simplistic but time is limited. I will start with politics. I think there is a principal and perennial political point that is inescapable: even in democracies most people are not conspicuous, when they speak, when they complain, when they suffer, or even, according to rational choice theory, when they vote. Most people become aggregated, flattened out, forgotten. So, what we need is a representative democracy that is better at thinking about how you listen to what people think, how representatives become informed by the extensive expertise and experiential knowledge that exists within the people they represent, and how you have representative institutions which create efficient channels for linking to all of that. The Internet comes in here, as the British Parliament has

been something of a pioneer in demonstrating and Ray O'Manell has been involved in making it happen with several others. The British Parliament has started to say that the process of deliberation about legislation is not something that belongs to it alone, nor should it only consult the usual suspects and the credible egos, but that the witnesses that democracies should hear are the people with particular experience and expertise in relation to legislation. So, for the first time last year, when Parliament looked at the question of domestic violence, it did something quite extraordinary. It heard a thousand pieces of evidence presented over the Internet from women who were survivors of domestic violence. That is not in 2020, it does not involve holograms, it involves people who previously had not been witnesses because they had not been able to come to Parliament. They were scared by the Parliamentary process and many suffer major problems of security. Yet a traditionally excluded group of women were listened to by MPs in a process that is meant to represent them. There has been one change in the law since, in relation to child-care, and there is a deliberative process which is contacted and we have just had the first on-line consultation which I organised last month, in which social claimants gave evidence on-line to the Social Security Select Committee. The Committee had never talked to claimants before. They heard from them on-line as part of a process of providing those people with computers, and with skills, but above all providing them a whole month to put their points and to question the MPs. Secondly, there is a geographical issue which is that politics does not just exist anywhere, it exists within space – and space is something that is always constructed. We have a very peculiar symbolic space for our democracy: where do you go when you go to our Parliament? You go into the Strangers' Gallery, you are a stranger, you know where you stand, and you sign a form promising you will not speak, and if you hear anything you agree, or disagree with, you will not make any noise. I am making a cheap point in a sense, as no one is suggesting people should go there to make a noise. You are not allowed to take notes, but neither are MPs. They are not allowed to take laptops even to Select Committees. It seems to me that what we need to be talking about is public spaces where anyone can go along and say you may not be discussing this, but it is an issue for us and we want to raise something. Jay Blumner and I in our piece for the Institute of Public

Policy Research on the Civic Commons argue for the creation of a 'civic commons' on-line, because you cannot just leave public spaces on the Internet to form themselves.

The final thing point is about the human and demotive element of the Internet. I think that the problem with politics in this country is that it lacks colour and depth. Actually, when we engage democratically what we tend to do before we do anything else is become emotional. We want to shout, to cry, to laugh, and that is what people often do when they watch satire programmes on television, or when they watch soap operas. In politics we have created a game and a set of rules which assumes that non-rational behaviour has to be excluded. I think what the Internet can provide is a landscape for that discussion to become occasionally experiential, narrative, emotional. It is about actual emotional intelligence, and I think one of the great dangers is that some people want to 'technologize' emotion, and turn it into a process of push-button democracy not realising it is essential experiential relationship. What we need to do, in fact, is to humanise democracy. The new rules of the game should be to proceed with the process of opening up, particularly the legislation, to real representative interaction with the people who elected and pay for it, and you do the same with the Executive. You create a civic space within the Internet that belongs to all of us, not to the Government, not to BT, not to a local authority, but to the people as a matter of right, and you create a culture there which is not exclusive of those who do not happen to say the right thing in the right way, in the right tone, with the right political references, but who can come in and seek to be heard simply because they are a human member of society.

Mr Jason Buckley
Founder, tacticalvoter.net

Vote-swapping is essentially the use of the Internet to allow individual pairs of voters from different parties to come together, and form pacts in the interests of beating a common enemy. The

sites originated in the US, and the origins of those websites is an object lesson in just how quickly things can be put into practice using the Internet. The seminar article where the word 'vote-swapping' was first used appeared 14 days before the US presidential election, yet within a matter of three or four days a clutch of websites had sprung up across the US. The authorities were so rattled, that in some cases the sites were closed down by State Legislatures almost before they got going. By the time the election was over, up to 500,000 had visited sites to complete transactions of vote-swapping which had only been invented two weeks before. In the UK we built on an established pattern of

Labour and Liberal Democrats tactical voting to defeat the Conservatives. As this was going to be more complex than in the US, I enlisted the help of an organization called the New Politics Network, distantly descended from the Communist Party of Great Britain, (and in fact there was a question asked in the House of Commons Intelligence Committee about whether it was desirable for an organization founded on Moscow gold to try and subvert the process of British democracy, but sadly the media did not pick up on that). We wanted to keep the site itself as simple as possible, very little in the way of flashy design.

It was focused on a simple sequence, people would visit the site using a postcode search or pull-down menu to find which constituency they lived in, because a lot of people are unsure of that. They were then directed to a page with the result of the 1997 election in their constituency, and if it was one of those seats where we felt tactical voting would be important in either ousting a serving MP or in holding onto a gain from the May 1997 election, then they were able to make an exchange pledge. For instance, if you were a Labour supporter in Kingston & Surbiton where the Lib-Dems were defending a very, very, thin majority you could pledge: 'I will vote tactically for the Liberal Democrats in exchange for a Liberal Democrat supporter returning the favour in a seat where a vote for Labour will count'. After that they were able to download posters, car stickers, sign up to distribute leaflets in their constituency and use the facility to tell their friends by entering e-mail addresses, and those friends and colleagues would receive an e-mail from the site alerting them to the possibility of tactical voting. Once the number of names had built up on the database, we had to go through semi-manually and pair them up. It couldn't be done completely automatically, or we would have had people being paired with Elizabethwindsor@saxe-coburg.com and other various spam registrations that we received from enraged Conservatives. The business of pairing people up was really the part of the site that was most successful as you can see from some commercial websites that have had similar success, like Friendsreunited.co.uk. The other aspect of the site that was very successful was the amount of coverage that we managed to get in the off-line media, which was really the oxygen of the site. Every time we received new publicity the hits soared and we were very dependent on that. The reason for the publicity was because the site was on the net, and the net was still sexy. There had been a tactical voting campaign in 1992 and 1997, but they did not get on to the political radar because they were just another campaign. We were doing something that people could actually join in. It was not simply a matter of passing round an on-line petition, or asking people to bombard their candidates or CEOs of unfavoured companies, such

as Esso, with disgruntled e-mails. In the future campaigns simply based around petitions or encouraging people to contact their democratic representatives are not really going to get off the starting blocks. I think at the other end, a legislator or executive will tend to value communication by the amount of effort it takes somebody to make it. If you have six red roses delivered to the door it obviously carries a great deal more weight than receiving a text message saying 'fancy a curry'. The ease with which people can communicate using e-mail I think, means it is likely to be de-valued in the eyes of the people receiving it.

An aspect of the site that unfortunately did not work was the hope of reaching a lot of new people who were not interested in politics. Most using the site were already very politically interested, a lot of them were campaigning for Labour, say, in the neighbouring seat, but realised that the Lib-Dem vote was the way to go in their own constituency. People who are looking at using the net to empower people politically will probably find that to those that have, the more shall be given. It is unfortunately going to be another means – apart from well-organized initiatives like the Hansard Society – for articulate professionals to get their point across, as they do in the other media.

What are the end results of the site? We had over 8,000 pledges, as many as 200,000 visits, and I could definitely say we unseated 2 Conservative MPs. The future direction is going to lie in forming independent cells. Two sites are doing this very well. One the Republican website, GOPTY standing for Grand Old Party, targeting different sections of American society, so you can register as an African-American Team Leader, or Muslim Team Leader, or Conservative Team Leader, and you receive messages tailored to that section of society. You are encouraged to engage in activities like talking on radio talk shows, e-mailing your Congressman, giving out leaflets, and so on. You are rewarded after you have done a number of these activities with such goodies as GOP Team Leader Caps or conference calls with local senior Republicans. So that is forming teams based on sectioning society into different interest groups. StopEsso.com, on the other hand, which is being re-launched in a few weeks, is a campaign aimed against Mr Exxon Mobil and also George Bush. This, I think, is going to try and section groups based on postcode location, telling you the Esso station nearest to you, and forming cells of activity to encourage local boycotts and picketing. So it is going to try to re-localize activity. Both these uses are pretty benign, but I think the same techniques could be applied to a whole range of different organizations. In light of recent events, there are two ways that direct action could go: either people will feel that their ability

¹ This is downloadable from the Institute of Public Policy Research website

to care is fully taken up with more important events, and the public tolerance to direct action will lower. The other possibility is that because of the bipartisanship that we are seeing in the legislative activity, people who do not feel their concerns are being addressed, may feel more marginalized and resort to a great deal of nuisance campaigning which can be easily fostered on the net.

So to conclude, petitions are not the way to go. We are getting petition fatigue both from people asked to contribute to them and those expected to take notice of them. The Internet is not a tool to pull in new people. It is a way of preaching to the converted, and if you do your job well, converting them into preachers. The future for on-line campaigning lies in creating entrepreneurial cells based around either sections, interest groups, or by re-localizing your supporters and forming them into activity cells.

Mr Anthony Barnett *Editor of openDemocracy*

I want to start by taking up this point of security and the Internet and voting, as we are talking about this very central issue, the Internet and new rules for democracy. It seems to me that Internet voting is coming. There can be little doubt about that, and clearly one of the drivers for this is that there is a great deal of money in this description by her of the way in which this can indeed be manipulated, for example in Kurdistan. But I was reflecting on the fact that President Bush had won, if narrowly, the recent election in the United States, the country famous for the slogan 'Vote early, vote often'. I think there is no way round the fact that the Internet and Internet voting is insecure and the only real answer to that is for us to abandon the secret ballot and that people need to be able to vote in their own name and to register that vote and to stand up for it. If voting becomes open and direct, then of course that voting process will be secure and it will be quite possible to use the Internet to ensure security.

The Internet is something that accelerates and intensifies the processes that we are now experiencing around the world but is not itself responsible for them.

In the press conference, Tim Berners-Lee was asked if he did not feel bad as the inventor of the Internet. He pointed out that had helped develop the World Wide Web, and that the Internet had been used by the hijackers, as if somehow there was responsibility between these two things. He very eloquently suggested that the Internet was really like a new form of paper. Will something specific in terms of the democratic process and the way we experience and conduct our government, come about due to the Internet? My feeling is not yet and not for some time. What the

Internet is doing is accelerating and intensifying world processes, which are taking place not because of it, but in parallel and before it, such as the great growth of world trade, and the degradation of the environment, the drive of the great corporations, the rise of the new media, and above all the acceleration of human migration and the transformation of communities around the world through travel, asylum and the global economy. You can see, in different ways, the Internet has been at work in intensifying and accelerating those processes and is not responsible for them. These processes are dissolving the nature and powers of national governments, and nation states over our lives. This is a critical issue for democracy, not just on a technical basis but because democracy itself was formed as the twin son of nationalism. In a democracy of the people, government of the people for the people by the people, who are the people? The people, in every case historically from the end of the 18th Century on, were the nation. People defined themselves as such, sometimes with positive and sometimes with very negative consequences. Therefore when we talk about democracy people tend to talk about nationalism, good and bad aspects of nationalism – and we are seeing both of those at the moment in the US. But people do not talk about Nationalism on the one hand, and then democracy, in terms of accountability or responsibility or technical voting on the other, as if these are two departmentalized practices, but actually the core aspect of the national vote. The core aspect of representing our representative is centred on this definition of who we the people are, who the demos are. We are a long way from achieving a global demos, a single global government, with a single form of global democracy. But this, in a way, is part of what is at stake in ‘globalization’. One of the most interesting arguments is the question of how do you make global decision-making accountable. Can you make it answerable? How do you get representatives to answer in this process?

Esther Dyson gave a very interesting interview and discussion where we probed her about the creation of ICAN, the governors of the Internet, this strange body in which there are no national governments involved and where there is an attempt, certainly by her, to create world parties that will influence its outcome. Now we founded openDemocracy launched in June, in an attempt to bring quality to the web: quality and independence and participation were our three watch words, in order to help to provide a site to commission and debate global issues. I think what we have discovered over the past two weeks is that it is all very well to talk about these issues, but talking about globalisation is very, very, confusing. What we have learned is global argument and discussion for a long time to come is going to be articulated through the

intensely different local and national experiences that we have, and part of the aim now must be to share those differences on a world scale. Particularly now there needs to be a deep and profound conversation between peoples, different peoples around the world and Americans, in particular. Different Americans with different arguments about whether they understand the way in which they are experienced, and what their reflections on that would be, and how they will conduct themselves in the wake of the crisis precipitated by the catastrophic atrocities of September 11th.

So, we do need a global public. It is going to be a very small one. It is going to be one that is already, in certain different ways, in conversation with each other but the Internet can be used as a quality site, it can deepen and thicken the process of the exchange, discussion and argument which people want very much at this particular moment.

I want to end on one particular point. One of the things that has driven the so called anti-globalization protests over the last few years has been the call for ‘voice’ and the Internet is an extremely good medium for voice, in which people can articulate their view, and put their experience into the writing. I think that one of the interesting things is that e-mail writing, e-mail prose, and now some of the writing we are finding on openDemocracy, has a power, a freshness, and vivacity because it is travelling across borders. This is very welcome and very important. So people want voice, but there is also a tendency associated with that to disparage the vote, to disparage representative democracy, to say what matters is voice and that is it. This desire for voice argument is a counterpart to the kind of abstract, cliché, spin-doctored, manipulated politics they are all far too familiar with, and many of those criticisms are, of course, entirely justified. Our leaders are present with us when we see them on television and that is sort of artificial. It is not that they are lying but they are not really telling the truth, they are really ‘thin’. But the fact is that national governments are the determining forces in terms of if we are going to have any really serious forms of accountability around the world at the moment. The idea that we can create a voice, and that that can be lodged at a global level without articulated, intermediate, institutions, above all through nations and governments, is ridiculous. Therefore it has to be voice and vote, they must not be seen as counters against each other. We need better, more open forms of voting and we need to be able to register our views along with voice. The idea that the Internet will abolish the need for representative government, or produce a completely ‘flat democracy’ is a fantasy. Today’s discussions have intensified, which is what I think is wonderful about it,

the need for real human conversation. The Internet allows you to identify who you really want to meet, but you will then certainly discover there is no substitute for talking. The Internet, and I speak as an unbalanced optimist, is something which can do good for us, although of course it can open a way for very bad things, and that means we need to be able to hold on to our own human values especially honesty and truth and

openness and so on. In global terms in the present situation we are finding that people want, perhaps to think, and we can use the web to bring careful thought to our public discussion. The web here is actually better than paper because of its sense of archive. You can check what people said last week or last month, so when they change their mind you know they have and actually it is quite unforgiving.

DISCUSSION:

James Crabtree

Industrial Society e-Society Programme:

There is a counter-view to Anthony's contribution that the web can be a kind of public space for discussion which is much discussed at the moment, coming out of a book called Republic.com written by an American legal theorist. This suggests the web peculiarly tends to make people more splintered off from the main, it tends to be damaging to a conception of the public realm that allows people to filter excessively what they seek to watch, so they do not have unforeseen encounters with new ideas, do not actually seem to think about things, tend to live in digital ghettos, are prone to cascades of false information flying across cyberspace. , Could you see that this might be a case of equally cursed and blessed?

Charles Lowe

Electronic government consultant:

Much of what we have heard today with the exception of tactical voting could not have been done with some other form of existing technology [TO FILL IN] but the real problem is that the Internet will break down the relationship between a constituent and a representative, or open it to access by everyone not just constituents, if their voting record was known and I can think of a whole other host of linked problems. So what virtues will the Internet bring?

Jason Buckley

Founder, tacticalvoter.net:

The return of direct action as it is understood today is a bit misnomer really, because direct action is in a way like throwing a tantrum to get your mother to buy you an ice-cream, whereas real direct action would be going to

the fridge and getting the ice-cream yourself. I think that there is a possibility that we might see an enriching of civic society through people opting into projects that they do not necessarily see as being funded by taxation. To give an example, you could use the net for a programme to save the World Service if you like by setting up a website where people could register their conditional support. People could register conditional support: we will pledge £50 a head towards the goal of saving this facility, and that would be triggered once a sufficient threshold of that 10,000 people had signed up for it. There are all sorts of products, whether charitable events or local community projects, that could be funded in that way, aided by the net into conditional fundraising in that way. This can be something that can be used to enrich civic society and it would not be possible without the net.

Steve Coleman

Hansard Society:

The openDemocracy website has been an excellent development in recent months. It has performed an important role, largely confined to the chattering classes and it would be very interesting would be to see that extended. I would love to see debate taking place involving people in Cairo, New York, Paris, Berlin and London, who are normally outside of the political loop. That is not quite happening, but openDemocracy has been a pioneering work. I have read and was impressed by Republic.com. If we go down the road of allowing unlimited narrowcasting to smaller and smaller target groups without public requirements for broadcasters or, indeed, for Internet Service Providers, to tell people certain things then our issues of required common knowledge and public responsibility, the notion of public

service probably need not ever have been invented – and this is a real question at the heart of Government. Looking forward 20 years, what’s going to change? I will be extremely modest about what I think is going to happen, but I am extremely excited about those modest changes. The issue of political aggregation is up for a change because of the sort of things that Jason Buckley is doing. I am not talking about the method of voting, I am not very excited about the method of e-voting. It does not bother me, I think it is rather hyped. I am much more worried about the fact that for most people, going to vote in a general election is the least politically important thing they will do in the course of a year, because they are wasting their votes, they are involved in something that they cannot plan and cannot coordinate with other people. The notion of doing deals on the Internet about politics has only just began, with the Nader Traders in America, with Tactical Voter in this country, and it has a long way to go. I think we will see a lot of more pre-legislative scrutiny involving the public. I would predict that within the next two years Parliament will go for an Internet-based discussion, pre-legislative scrutiny of all major draft bills. But I think the most important thing we are going to see in the next 20 years is the coming of digital television. And when you share technology within a family, you will actually turn it into something that has got much more of a human flavour. In terms of civic space, I have two answers. First, I think, all people deserve the right to enter what has traditionally been called the market-place of ideas. Civic space is important in a democracy simply because dissenting views must have a space. Now the most important thing we need in our democracy now is trusted third parties, not in the technological sense, who can tell the public that they have to learn skills about what it is to be ‘a public’, and we need citizenship education as somebody mentioned earlier. The process of democratic mediation is something we have not really required in this country in the past, because we do not have off-line deliberation – events like this, in which everyone is terribly civilized and the person in the chair never has to raise his voice at anyone very much! The 21st Century is a century in which we have to grow up in democracy to recognize we have to represent ourselves better, and if the represented do not have skills and strategies for this technology, it will not be handed to them on a plate.

Anthony Barnett
Editor of openDemocracy:

This is now my opportunity to be disagreeable. Much as I appreciate what the Hansard Society has been doing I do not think that what happens to the Internet is more important to what happens with the euro. What happens to the euro, taken as shorthand for whether or not there will be a unified Europe, is much more

important. That will then start to determine the type of political context in which the Internet and other communications take place. I do want to emphasize this point that the Internet will intensify difference, but itself, on its own, as a means of communication, will not bear responsibility for what is communicated. It will have a great effect on the way we live but it is not itself to be fetishised.

Now let’s get to the heart of the matter, quality. I was asked how do you know what quality is? We all know what quality is, you argue why it is good. That this is why I am an optimist: I think we know quality when we see it. The question about the fragmenting effect of the Internet on society is that it brings us back to human relations. If people ‘disappear’ into an Internet world, where all they communicate with is what they see on the screen, then they will be very sorry people, isolated and fragmented. We want the Internet to be something we live with, part of our life but it helps our life, between human beings doing the different sorts of things that human beings do. Graham Allen asked me to summarize the Internet discussions we have had on openDemocracy since September 11th, especially about the legal aspect, which has touched the heart of how we should respond in world terms to September 11th – which is to criminalize this action rather than to ‘bellicose’ it and to identify those people who have perpetrated it and ensure that they are all punished and that this is done in a way that brings all civilizations, including the Muslim civilization, within it, and this process is acted out in a judicial, proper, and very determined fashion. David Held, a Professor at the LSE, has argued strongly for the creation of a much stronger international court system which would be able to deliver such an international verdict. He is doing another piece for us soon with Mary Kaldor. A very interesting piece by Roger Scruton argues that one of the problems is that the Arab area itself, for various historical reasons, lacks real nation states and therefore it has created people who are acting as the terrorists with no political calculus partly because they don’t represent a nation state. So, you have got to go deeper into the processes whereby people create and respect the cultures that are capable of that kind of a judicial resolution. We have included people from Pakistan and New Delhi and so on. It is vital that this desire is internationalized on the Internet, and there is an international community out there that wants to have it.

¹ Cass Sunstein, *Republic.Com*, Princeton University Press, 2001.

CONCLUDING REMARKS:

Paul Flather

Secretary-General of the Europaeum:

I want to move seamlessly on to our concluding session. I invite our two panellists who have been listening diligently to the day's proceedings to give us some thoughts about what struck them as being key points, where we might go next, what we might want to do, remembering that Andrew Pinder, e-Envoy, invited us to enter into a dialogue, to tell him how we see it, and to comment on his policies as they are developing. He used the phrase, if you remember, that the Internet could be a kind of shock absorber, a sort of intermediary in the process of democracy. Also remember Andrew Graham's offer just before lunch that the new Oxford Internet Institute is setting up its agenda and Steve Woolgar is still here, who sits on the board, so he can take back our thoughts. We will be publishing a report which we will send to all of you and most importantly to the EU and the European Commissioner for External Affairs, Christopher Patten.

Mr Derek Wyatt, MP

Member of the Select Committee for Culture, Media and Sport

These are just thoughts that have come to me over the day. First, the debate about I.D. cards: these will be 'smart' cards, and I wonder if those smart cards could be voter cards. Second, I think that the Government is out of kilter with the Internet. I would not have an e-Envoy, I would have a Minister, and inside the Cabinet Office. He should be the most important person after the Prime Minister and Chancellor of the Exchequer, so I would probably call him Chancellor of the Internet. I actually think this and we have not grasped it. Andrew Pinder has to go round on his knees to other departments. It is a bit like the old BT, Stuart, it is. I do not know how you get out of it. Younger people actually want the access, they want it differently. They do not want what we are offering.

Now, some solutions. I think there should be a Government shop in every High Street. I think people need to touch Government, to go in and talk and say 'I want this' or 'Where is this?' Not Starbucks as it were, but some friendlier way of relating Government in this High Street so you can touch it and see it. Let me give you an example: 80 per cent of all social security goes to 20 per cent of the population. Of that 20 per cent about 80 per cent cannot read. Now, we have put all these documents on the Internet for them. Well forgive me, but what you should do is get call-centres that fill it in for them. But they will need some

identification. So, maybe the smart card is the way – they can say my PIN is X & Y and maybe even the telephonist can fill it in for them. As you know £2bn of social security is not claimed each year, and I am not surprised, I cannot fill the damn forms in. In the short term, I would like each of the departments to issue league tables – like the hospitals league tables – as to where they are on the e-Government spectrum, so that we can have an immediate discussion on-line, and say 'Why are you so bad?' or 'Why are you so good?'

I know television viewing figures are based on one to two thousand interviews a day. So, the government should ask one or two thousand people what they think about the Euro or the Internet or about going to war? People have been doing that for 50 years on the commercial side, but there seems to be a fear that it will be too democratic. We have nothing to worry about: let us make it more democratic. I think the 'shock absorbers', frankly, have worn out. Now turning to globalisation: I was in Tunisia three weeks ago. They have been speaking Arabic there for 7,000 years, Carthage was deep in their culture. Their real worry is that English is the real Internet language, and their young people speak Arabic. Their worry is this is something that is going to go. The discussion of the last two weeks by Muslim and Arabic communities is that they fear the power of the English language, and we have not really looked at that as an issue. Of the world organizations: the UN; the World Bank; the IMF; the World Trade Organization, even the EU, were born out of the 1940s and are largely in America. Well, America has got to let them come out of the US. They are not global institutions, they are Western institutions. We dominate them. Well, if you were Arabic, Japanese, German, you would wonder. I am greatly taken the story of Harrison and the story of Longitude. Then I think we need some competitions in this field. The Government needs to put out some prizes to solve some of the issues we have raised today. What is wrong with putting out a £100,000 prize? Harrison got £19,000 in 1819, that is about £3m in today's money. Not a bad offer in 1819 to do the tides, and work out whether Nelson could go in or not to win his battles.

Then I think that one thing missed about the US elections was that McCain ran a Presidential election in every state. While he was travelling, his website collected funds, \$1m or \$500,000, so that when he arrived in Washington he could buy more media space. He ran a very very new type of campaign, using the

Internet and we need to have a look at that. Finally, on ideas for participation, we have tried supermarkets, we have tried weekend voting, we have tried two-day voting. But guess what, Stevenage did postal votes and they were sensationally successful: around 70 per cent was postal voting. What is wrong with that? It is a simple point, but if people can vote when they like and send it in, it was clearly successful.

Ms Katharine Everett *Controller New Media, BBC*

Firstly, I would like to set the record straight about the BBC shortwave broadcasts to America and Australasia. Yes, it is true we have ceased those, but the World Service is still available on FM. One of the things we have been able to do with the money saved is increase in the past two weeks our broadcasts to Afghanistan.

The phrase I picked up from Andrew Pinder at the beginning was the question: 'In what way can the Internet enhance representative democracy?' Clearly, one way is e-voting. Now, it took about 23 years for elections to make their way properly on to television. Television was invented in 1936, but the 1959 election was the first one that was really a TV election. So, moving slowly is frustrating, but I do not think we should despair. I look at my kids who have a totally different relationship with technology and the Internet than I do (and whatever we are saying here today, would be, I think, quite alien to them), and when they are voting, I think it will feel very different just because of their different relationship with the technology.

The other key issue is about engaging people in the democratic process, both by informing them and very importantly, Julia Glidden's point, not just by giving them information but by helping them understand – and also by enabling people to air their views, to communicate. The Internet is clearly a medium that can enable that, and as practitioners, and potentially an enabler, I think we have a duty to help that.

We are a long way off from properly exploiting the potential of the technology. There are a number of reasons why that is the case, partly because many Internet users, ordinary people, are reasonably passive users. We know from running chat rooms and message boards at the BBC that a tiny minority actually want to participate in them. That is not to say that there are not some fascinating message board threads and issues like health that people really care about.

My next point is that for many people it does not feel relevant enough. I was reading an article the other day that said the issue that has driven more interest in local politics than anything else is the introduction of controlled parking zones. Why? Because it is literally on your door-

step. You know when you cannot park outside your own house without paying, you are going to get hot under the collar, and maybe do something about engaging in local politics. I think there is a real issue about relevance. The third issue is user ability, and here I picked up a point that Tim Berners-Lee made. We know how to 'do the technology' but we are not very good at the user interface. I spend most of my waking professional life wondering how we can make the BBC website easier for people to use, how we can make it easier for people to find the information they want. We all have further steps to make. The BBC clearly has a contribution to make in this and it will not just be through the web. Stephen Coleman mentioned the importance of digital TV. On Sunday night after the events in America, BBC1 transmitted a Panorama special about Bin Laden and opened up an e-mail and message board. Although Panorama have done this previously via the web, for the first time, viewers were also able to contact the message board by digital cable television. There is a fifth of the number of homes in the UK with digital cable as with the Internet, a really tiny proportion, and yet half the e-mails that came in, did so digital cable users. This is a medium that is really under exploited. Digital televisions are going to make a big difference to the way people engage with these issues. Again we have got to make it easy – even television is still too complicated for many people. Finally, both the Internet & interactive TV really are only a means to an end. They both have enormous potential to enhance representative democracy, but as I said at the beginning, we, the practitioners, and the BBC, clearly need to take a lead here, to act better as intermediaries between the technology and the people we are asking to use it.

Paul Flather *Secretary-General of the Europaeum*

If there are no further questions and points, I just want to thank all of you both for participating and also sticking to the end with us. I want to thank all the folk who have been working behind the scenes to make this happen, to usher us in and out and to lunch and back. I want to thank all the various partner organizations that have been involved in this enterprise. I think it has been a great day. I have really enjoyed the fact it has been a dialogue. I take away two snapshots of our dialogue between someone like Caspar Bowden, on the one hand enormously knowledgeable, great technical detail, so important, contrasted with Predrag Vostinic and his very real example of how active participation using the Internet can change lives and government. Most of all, I enjoyed, the kind of positive scepticism of Steve Woolgar on the one hand, which is very useful in discussing these issues, but what I want to go away with actually is the dreaming qualities of Tim Berners-Lee, his wonderful outline of the Semantic Web, which may well be the dominating next step, if we can hang on and live that long. Thank you all very much, and we will continue with this dialogue.

RECOMMENDATIONS

Investment

- [1] The Internet, as an increasingly powerful communications medium for the 21st Century, must be fostered and developed to keep Britain at the forefront of the knowledge revolution.

It is therefore *recommended* that UK Government Ministers and Select Committees and the European Commission should ensure that they treat the development of e-commerce, e-learning, and especially in the context of this report, e-government as priorities, ensuring that necessary public and private technical investment occurs in the core communications infrastructure, including the provision of broadband networks. Bandwidth incentives to encourage the high-technology sector to develop and locate in areas of high unemployment, for example, should be actively developed.

Access and e-Governance

- [2] The Internet provides unparalleled opportunities for the provision of public information to all citizens, opportunities to consult citizens on prospective legislation and policy-making, and the means for involving more people in public decisions.

It is therefore *recommended* that the UK Government must be held to its pledges to bring affordable Internet access to all citizens over the next five years, putting easy and cheap access Internet cafes in all High Streets, public libraries and other suitable locations, and that all government services are freely and easily available online by 2005, and that the Government ensures its policies are put out more widely for feedback and consultation. The European Commission should continue to encourage similar coverage across the Continent, producing league tables.

Change Research

- [3] The Internet is changing the way society works, shops, engages in leisure, accesses information, meets, collaborates, and even thinks. Its impact on the social, cultural, economic and political life of the century will undoubtedly be very significant, and even according to current findings, counter-intuitive.

It is therefore *recommended* that the UK Government emphasize the need to research and investigate the processes of political, social and economic change brought about in the country by the Internet, through the continuing support of projects such as the Virtual Society Programme, and such new independent centres of excellence as the Oxford Internet Institute, perhaps linked to bodies such as universities. There should be Europe-wide research sponsored by the European Commission.

e-Democracy

- [4] The Internet can provide, and consolidate, access to information, policies and activities, related to elected representatives at local, national and international levels, and thus contribute to making our democratic systems more accountable. It also provides substantial opportunities for improving public understanding of representative democracy, and linking constituents with their elected representatives. However, the Internet must be regarded as a tool, a medium, a powerful new means of communication, and not as a panacea to solve perceived failures in democratic governance.

It is therefore ***recommended*** that independent e-Democracy centres should be co-funded by the UK Government along with support from trusts, foundations and corporations, to help create, develop and disseminate the tools and systems needed to fully realise these opportunities for 'improving' democratic governance.

It is also ***recommended*** that all British schools should include information and knowledge about e-democracy in their compulsory curriculum teaching on citizenship, teaching students to explore and utilise the Internet in productive new ways for understanding and engaging in the democratic process.

e-Polling

- [5] The Internet provides a range of cheap and easy opportunities for 'instant' on-line polls, electronic surveys, snapshot consultations and so forth. These may be a helpful addition in the formation of public opinion. Equally, they are open to misuse, or even abuse, as simplistic, partial, reflections lacking in sound methodology and good analysis. As such they could become a negative factor in democratic governance.

It is therefore ***recommended*** that the UK Government ask appropriate bodies (such as polling agencies, the Press Council, and the Electoral Commission) to look into on-line polling, to produce and disseminate guidelines and to monitor, and if necessary regulate, these developments. The European Commission shall also seek to develop European-wide guidelines.

e-Voting

- [6] Voting remains crucial to the functioning of democracies, regardless of any trends towards other modes of civic or alternative action. New electoral patterns, allowing voters to vote when and where they wish, should be encouraged. These should also be seen as means to encourage more members of society from these social and economic backgrounds to gain access and exposure to the Internet.

It is therefore ***recommended*** that investment in 'pilots' to develop e-voting systems be regarded as democratic duty, using the experience gleaned from e-voting experiments (such as the Arizona Primary election, the UN officer elections, and the ICAN globalised Internet vote). These must be viewed as much as a means to increase electoral transparency, electoral ease, provide accurate and timely results, and increasing access and experience of technology to a much wider and diverse community, rather than simply as a means to cut costs in running elections. It is also expected that, done in the right ways, they will serve to boost interest in elections and voter turnout and to boost automatic guarantor of increased turnout.

It is also *recommended* that the opportunities that will become available through authenticated on-line voting, to allow voter participation across borders in genuine Europe-wide elections, be explored by the European Commission.

It is also *recommended* that a report be prepared on the potential for developing 'smart cards' to aid on-line voting, and the technological alternatives for acceptable voter authentication.

Regulation

- [7] The regulation and policing of Internet content cannot be performed successfully by any single state or group of states, and free speech online has demonstrated itself to be a strong pillar of democracy. However, the use of the Internet by criminals, hate groups or others, to promote terror and other illegal or potentially dangerous activities clearly needs to be restricted at the international level.

It is therefore *recommended* that regulation of service providers should be implemented by the UN International Telecommunication Union, and should be done without compromising the vital principle of openness and free speech. This may be best taken forward by the European States acting together. Any such findings shall be openly reported to allow assessment and evaluation.

Research and Development

- [8] The full capabilities of computing to facilitate research, understanding and policy development using the potential of the Internet is far from being realised. The majority of the information now held on the Internet remains incomprehensible to the very computing network that carries it. This greatly restricts our ability to use the computing, as opposed to the communicating, dimension of the Internet to society's best advantage.

It is therefore *recommended* that the research and development of 'semantic analysis' and 'natural language' comprehension tools that would allow the computing power of the Internet to emerge and be properly used, now be strongly supported, and that the UK seek to take a lead in this development work.



FORUM PRESENTERS AND SESSION CHAIRS

Annexe I

Mr Tim Berners-Lee

Weaver of the World Wide Web. In 1999, Time magazine published a list of the 100 most influential minds of the 20th century. Alongside names such as Albert Einstein and Sigmund Freud is Tim Berners-Lee, the British inventor of the World Wide Web.

Today we can barely imagine a world without the Web. It makes it possible for Internet users to access information from across the world with a single click of a mouse. It has changed the world and the way we perceive it for ever. Unlike many other significant inventions, the Web was invented by one man. Thomas Edison may have invented the light-bulb, but he had dozens of people in his laboratory working on it. Tim Berners-Lee did it single-handedly.

Berners-Lee, now 46, was educated at Emanuel School, London, and Queen's College, Oxford, from where he graduated with a degree in physics in 1976. After working for Plessey Telecommunications, he joined CERN, the European Particle Physics Laboratory in Geneva, as a consultant software engineer. It was at CERN, during a six-month appointment as an independent contractor, that Berners-Lee wrote Enquire, the programme that formed the conceptual basis for the future development of the Web. This programme was named after an 1856 Victorian book, Enquire Within About Everything that offered its readers advice on everything from stubborn stain removal to Financial management. Berners-Lee developed the Enquire programme for his personal use as a means of storing and capturing the relationships between information.

Internet protocols were used at CERN as early as 1981. By 1989 it had become the largest Internet site in Europe. It was in that year that Berners-Lee returned to CERN, and in March submitted a paper to his superiors titled Information Management: A Proposal that outlined the advantages of a hypertext-based system. By Christmas Day 1990 the WorldWideWeb client program – a point-and-click browser/editor – was first used within CERN, and on the Internet at large from the summer of 1991. From 1991-93 Berners-Lee continued working on the design of the Web, refining his initial specifications of URIs, HTTP and HTML and coordinating feedback from users across the Internet.

From 1991 onwards, the Internet, which began life as a defence project, and the Web, a side effect of research into particle physics, grew as one. The Web helped make the Internet into a more mainstream medium, relying on the infrastructure provided by the Net. Tim Berners-Lee joined the Laboratory for Computer Science at the Massachusetts Institute of Technology (MIT) in 1994, and in 1999 became the first holder of the 3Com Founders Chair. He is Director of the World Wide Web Consortium, which coordinates Web development worldwide. He is the author of Weaving the Web, on the past, present and future of the Web.

Berners-Lee has received numerous awards, including an OBE in 1997, and honorary doctorates from the Parsons School of Design New York, Southampton University, Essex University, Southern Cross University, the Open University and Columbia University. He is a Distinguished Fellow of the British Computer Society, an Honorary Fellow of the Institute of Electrical Engineers and a Fellow of the Royal Society. Last year he received an honorary degree from Oxford.

Mr Godfrey Hodgson

Recently retired as director of the Reuters Foundation Programme at Green College, Oxford. He worked as a journalist for a number of British newspapers, including The Observer, The Sunday Times and The Independent and for television, where he was presenter of the London Programme and an anchor of Channel Four News. Trained as a historian at Oxford (1st class Hons) and the University of Pennsylvania (MA), he is a member of the Society of American Historians and a visiting fellow at the Rothermere American Institute in Oxford. He has published half a dozen books on American politics and history, and has taught at Berkeley, City University, Harvard and Oxford. He is currently writing two books, a history of the US over the past 25 years, and a biography of Woodrow Wilson's foreign policy adviser, Colonel House.

Mr Andrew Pinder

e-Envoy, Cabinet Office, driving the Government's UK on-line strategy, reporting directly to the Prime Minister and working alongside the e-Minister, Patricia Hewitt, and the Minister for e-Government, Ian McCartney. After 18 years in the Inland Revenue, where he became Director of IT, he moved to the private sector, becoming Director of Operations and Technology at Prudential Corporation, before joining Citibank Investment bank as head of European Operations and Technology. Since leaving the bank in 1999, he has been engaged in a couple of new technology-related start ups and, as a partner, in a small venture capital firm, as well as carrying out a number of management consultancy assignments for Government.

Mr Stuart Hill

Was appointed BT Stepchange Director in January 2001. BT stepchange.gov is an initiative established to help government meet the challenge of creating a modern, integrated public sector. Previously, Mr Hill was general manager for the financial services industry in BT's Syncordia Solutions. He has had a number of roles in BT's finance community, including general manager in charge of the relationship with Lloyds TSB Group and deputy general manager with responsibility for the insurance industry. In his present role he is particularly keen to examine ways in which BT can use its capabilities to form partnerships with government in harnessing the new technology to benefit government, business and citizens.

Dr Paul Flather

Currently Secretary-General of the Europaeum and Fellow of Mansfield College, Oxford. He worked for eight years as a journalist with the Sheffield Telegraph, BBC, Times Higher Education Supplement, The New Statesman where he was deputy editor. His research is on Indian politics since Independence. He was an elected member of the Inner London Education Authority in the 1980s (chairing its committee on post-school education). He was founding Secretary-General of the Central European University (1990-94) set up in Budapest, Prague and Warsaw, by George Soros after the 1989 revolutions. After running external and international programmes for Oxford University for five years, he took over the Europaeum, an association of leading European universities.

Dr Colin Lucas

Vice-Chancellor of Oxford University since 1997, and, former Master of Balliol, a specialist on the history of Eighteenth Century France, was educated at Lincoln College. After academic posts at Sheffield and Manchester universities, he became a Fellow and Tutor in Modern History at Balliol College (1973-90). He was appointed Tutor in Modern History (1990-94) at the University of Chicago before becoming Master of Balliol in 1994.

Dr Julia Glidden

Senior executive with extensive experience in the domestic and international policy arena. She completed her D.Phil. (Ph.D.) in international relations at Oxford University in 1995 and has lectured extensively around the world on global politics. Dr. Glidden is currently Vice President, Public Affairs for election.com, a global election services company that conducted the world's first legally binding on-line political election for the Arizona Democratic Party, the world's first global on-line election for ICANN and the United State's first national on-line election for Youth-e-Vote 2000.

Mr Predrag Vostinic

Serbian journalist specialising in the Internet and new technologies journalism, currently Coordinator of the Southeast Europe Initiative for OneWorld International. He was previously deputy manager and editor in chief for Radio Globus in Kraljevo. He has also worked as a correspondent of for Radio B92 (informative and special editions) as well as a correspondent and trainer for ANEM (Association of Independent Electronic Media).

Professor Stephen Woolgar

Director, ESRC Virtual Society? research programme, based at the Saïd Business School, University of Oxford. He was formerly Professor of Sociology and Head of the Department of Human Sciences and Director of CRICT (Centre for Research into Innovation, Culture and Technology) at Brunel University. He has been published widely in social studies of science and technology, social problems and social theory and 'Virtual Society? Get Real! the social science of electronic technologies is to be published by Oxford University Press in 2002. He currently serves on the E-Commerce Ministerial Advisory Group with the e-Minister, Patricia Hewitt MP.

Dr Stephen Coleman

Director of the E-Democracy Programme for the Hansard Society. He lectures in Media and Communication at the London School of Economics and chairs the ERS Commission on Electronic Voting and Counting, hosts the BBC Online 'It's Your Parliament' website. He is a member of the DfEE working party on ICTS and the citizenship curriculum, and is a consultant to the Cabinet Office on the UK On-line citizen's portal. He is also on the editorial board of Information, Communication and Society and is a regular write for The House magazine and Parliamentary IT Monitor.

Mr Jason Buckley

A freelance consultant for Internet campaigning and community projects. After reading Philosophy at Corpus Christi, Cambridge, he established family businesses in retail and manufacturing. Spurred by the vote-swapping websites in the US presidential election, he set up www.tacticalvoter.net in collaboration with Seawest Ltd and the New Politics Network.

Mr Anthony Barnett

Editor of openDemocracy, an independent, global network for high quality debate and participation on the major issues of our time. Its pilot was launched in June this year on www.openDemocracy.net.

Mr Derek Wyatt, MP

Member of the Select Committee for Culture, Media and Sport. He has helped to found several new All Party committees – including one on the Internet, which he co-chairs. He has a particular interest in communications and prior to becoming a Member of Parliament he worked in the media with jobs at Sky, Flextech, TSL Ltd., Independent Image Ltd., Reed-Elsevier, William Heinemann, and George Allen & Unwin. He has also previously worked as a freelance journalist for the Financial Times, The Times and The Observer.

Ms Katharine Everett

Controller New Media, BBC, is responsible for the BBC's services on the PC, Interactive TV and Broadband. Prior to that she was Controller of Interactive TV and pioneered the BBC's developments in interactive television, navigation and digital text services. Under her leadership, the department launched BBC Text, BBC What's On, Web on TV and the BAFTA award-winning Wimbledon Interactive service.



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Annexe II

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Steve WOOLGAR	Head of ESRC Internet Research Programme
Derek WYATT MP	
Chris YAPP	ICL Fellow, Lifelong Learning ICL

THE EUROPAEUM – BACKGROUND NOTE

Annexe III



The Europaeum was founded in 1992 as an association of major European universities, with a mission to:

- Promote excellence in academic links in research and teaching collaboration between the Europaeum partners;
- Act as an open academic network linking the Europaeum partners and other bodies in the pursuit of study;
- Serve as a resource for the general support and promotion of European studies;
- Function independently in the search for new ideas;
- Provide opportunities for the joint pursuit of new pan-European initiatives;
- Serve as a high level ‘think-tank’ exploring new ideas and new roles for universities in the new Learning Age;
- Provide a ‘pool of talent’ to carry out research and inquiry into problems and questions confronting Europe today and tomorrow;
- Help train and educate future leaders for a new Europe.



MEMBERS

The Europaeum consists of seven leading European university institutions: the University of Oxford; Universiteit Leiden; Università degli studi di Bologna; Universität Bonn; Université Paris I Panthéon-Sorbonne; the Graduate Institute of International Studies, Geneva; and Charles University, Prague. Together they are working to create a ‘university without walls’, which promotes new Europe-wide thinking and provides future business, opinion and political leaders of Europe with opportunities to share common learning experiences at a formative age.

It is governed by an international Council consisting of the Rectors, Presidents and Vice-Chancellors of the seven partners plus other senior nominees. It has a simple structure, with a working Academic Committee of two senior academic representatives from each partner, responsible for academic programmes, a Management Committee which takes care of the day-to-day links, and each partner institution has its own local group or committee to oversee Europaeum activities.

ACTIVITIES

Early links focussed on politics, economics, political thought and law with new posts and two new centres

being spawned. Collaborative activities were launched, including annual conferences, and summer schools, student bursaries, teaching collaboration and a number of linked Visiting Chairs, for example in Literature and Opera Studies.

These strengths continue, with the academic activities of the association now extending across the full range of Arts subjects involving theologians, historians, and classicists in the network. Four institutes in Oxford are linked to the Europaeum – the Institute of European and Comparative Law; the Centre for European Politics and Society; and European Humanities Research Centre; and the Modern European History Research Centre. The Europaeum also has links with the new Oxford Internet Institute.

PRESENT AND FUTURE

A permanent secretariat was established in 2000, allowing the further expansion of Europaeum activities. New initiatives include an Internet knowledge and virtual seminar network, a Europaeum certificate, a Lecture series, and a large-scale research programme looking at the future role of European universities in the knowledge economy.

ACADEMIC CONFERENCES

The Europaeum stages annual academic conferences on key themes of topical concern, including the Future of European Elites, the Limits to Europe, and US-European Relations.

RESEARCH SUPPORT

The Europaeum Research Project Groups and New Initiatives Schemes both provide grants to support collaborative research across the association and innovative academic collaborations.

RESEARCH PROGRAMME

The Europaeum is conducting a two-year programme of research and expert conferences to investigate the impact of the ‘knowledge revolution’ on European higher education. Conferences are being held in Berlin, Paris and Bonn.

STUDENT SUMMER SCHOOLS

Each year students from the seven universities participate in week-long annual summer schools. Recent themes have been European policy formation, political

leadership, politics and the church, and this year 'Human Rights and the movement of people'.

EUROPAEUM LECTURES

A series of lectures examining the key issues confronting Europe are hosted by the Europaeum. They are subsequently published as a set of pamphlets.

SCHOLARSHIPS

A number of scholarship schemes are linked to the Europaeum, allowing students to undertake additional study at different institutions during their degree courses, and to gain additional qualifications.

VISITING PROFESSORS

A fund has been established to support the movement of academics from one partner institution to another, including the hosting of a Europaeum Visiting Professor each year at each institution.

JOINT TEACHING PROGRAMMES

Multi-centred teaching programmes are a central part of the Europaeum's work. In addition to teaching links in Law, Politics and Economics new programmes being developed include a Europaeum MA in European Political Culture, Ecumenical Studies in Protestant Theology, and a Leadership Programme in European Business Cultures.

THE EUROPAEUM KNOWLEDGE CENTRE

A Europaeum Knowledge Centre, linking scholars the universities of Oxford, Leiden, Bologna, Bonn, Paris (Sorbonne), Geneva and Prague (Charles), is to be established through a new partnership between the Europaeum and Hyperwave AG. A powerful new knowledge exchange and communications resource will thus be opened up to than 150,000 European academics and students, representing a considerable step towards fulfilling the vision of the Europaeum members of a 'university without walls'.

The network aims to foster communication and interaction between scholars working on similar themes, students and supervisors across international frontiers, and academics across Europe – in different institutions and cultures – thus generating a range of fresh academic reactions, interpretations and insights.

Students and faculty will be able to create a personal workspace; upload papers; publish work; consult reading lists; reference library catalogues and holdings; communicate and collaborate with colleagues through a single common and multilingual resource. This will in itself create a body of information, opinion and knowledge related to each subject area, available for easy reference with extensive search capabilities, including personally customized notification of future additions to knowledge in each chosen field.

It is planned that each student and academic will have access to these facilities whenever and wherever they want – a facility vital for exchange students and visiting professors – with the eventual aim of enabling all Europaeum academics and students to publish intellectual content, and thus participate in expanding the knowledge resource.



British Telecommunications plc

British Telecommunications plc is one of the world's leading providers of telecommunications services and one of the largest private sector companies in Europe. Its principal activities include local, long distance and international telecommunications services, mobile communications, Internet services and IT solutions. In the UK, BT serves over 28 million exchange lines and nearly eleven million mobile customers, as well as providing network services to other licensed operators.

Geographically, BT has operations worldwide, although it is the company's intention to focus more on the UK and Western Europe.

In April 2000, the company announced a re-grouping of its activities into new, self-contained business units. These are:

- BT Ignite, an international broadband network business, focused primarily on corporate and wholesale markets;
- BTopenworld, an international, mass-market Internet business;
- mmO2, an international mobile business with a particular emphasis on mobile data, which BT intends to demerge towards the end of 2001;
- BT Retail, serving end-business and residential customers; and
- BT Wholesale, selling network capacity and call terminations to other carriers.

BT and AT&T have also created Concert, a global telecommunications company serving multi-national business customers, international carriers and Internet service providers worldwide.

In the year to March 31, 2001, BT's group turnover was £20,427m with profit before goodwill, amortisation, exceptional items and taxation of £2,072m.

For more information, visit www.groupbt.com



BT stepchange.gov

British Telecommunications plc is one of the world's leading providers of telecommunications services and one of the largest private sector companies in Europe.

BT is focused on building on its established strengths and focusing on the growth markets of Internet, broadband and mobility whilst playing an active role in the community and achieving the highest standards of integrity and customer satisfaction.

Delivering high quality services that meet the needs of UK citizens and business and formulating policy in an increasingly complex world, demand joined-up working across the public sector. BT not only understands the challenge this presents, but has itself achieved a major organisational transformation based on both exemplary use of electronic applications, innovation and effective change management.

BT is passionate that the UK should be online and in the lead and has made a huge management and financial commitment to this goal, including the creation of stepchange.gov, an initiative within BT Retail dedicated to innovating to transform public services.

stepchange.gov is helping put eGovernment and modernization policy into practice, tackling the difficult issues together and building practical solutions. We're working closely with people across the public sector to help shape and implement policy, inform new thinking, share good practice, test ideas, manage change and deliver practical solutions - be they innovative pilots or major projects. Backed by the resources of the BT Group, the stepchange.gov team not only understand the issues but have real experience of partnership and effective delivery.



An ESRC Research Programme



26 September 2001

Democracy and the Internet: new rules for new times

The Internet, participation and democracy: some lessons from the Virtual Society?

Steve Woolgar

What are the prospects for democracy and the Internet? It is argued that a clear understanding of the prospects and pitfalls requires us to adopt an attitude of 'positive scepticism'. We need to be positive while remaining cautious about the claims that the new technologies can offer significant transformations in the democratic process. We need to be sceptical of such claims without simply adopting a negative outlook. The appropriate balance is met through the perspective of 'technography' – the application of rigorous anthropological analyses to activities in and around information and communication technologies (ICTs).

This paper draws on some recent results from a major ESRC research programme – 'Virtual society' – which has investigated the social impacts of new electronic technologies. Many of the results are counter-intuitive: in short: Internet technologies are not being used to the extent we imagined, for the purposes anticipated or by the people we expected. These results are captured in Five Rules of Virtuality, each of which offer an aide memoire or rule of thumb for assessing the likely social impact of electronic technologies. The paper discusses the application of some of these rules to the prospects for the enhancement of the democratic process by Internet technologies.

A key injunction of Virtual Society? research is to focus on the detailed and actual experiences of Internet usage, and especially on the relation between on-line and off-line activities, rather than at the level of summary and synoptic analysis. It is argued that we are often misled by the somewhat idealized visions of democratic process which feature in discussions of the Internet. This is illustrated with examples taken from recent 'political' postings on discussion lists, the character of which is best described as electronic graffiti.

The ESRC Virtual Society? programme comprises 22 projects and 76 researchers at 25 universities in the UK (and three overseas: Amsterdam, Copenhagen and Purdue, USA). Its headquarters are at the Saïd Business School, University of Oxford. The programme is now in the post-project phase and will conclude in early 2002 when Virtual Society? Get Real! – the social science of electronic technologies is to be published by Oxford University Press. Further information, including access to the electronic version of the Profile 2000 report, is available from the website at: www.virtualsociety.org.uk

Steve Woolgar is an internationally recognized sociologist, Director of Virtual Society? programme and Chair of Marketing at the Saïd Business School, University of Oxford. Previously he was Head of CRICT at Brunel University. He has published widely and his books have appeared (in the vernacular) in a number of other countries. He acts in a consultancy capacity for a number of organizations and other research initiatives and is a member of the Ministerial Advisory Group on Consumer Affairs at the DTI.

OXFORD INTERNET INSTITUTE – BACKGROUND NOTE

Annexe VII



Welcome to the OII

Oxford University has created the world's first truly multidisciplinary Internet Institute based in a major university. The Oxford Internet Institute (OII) will study the effects of the Internet on society with the goal of putting Oxford, the UK and Europe at the centre of debates about how the Internet could and should develop.

The OII seeks to achieve this aim by encouraging and generating activity in three areas relating to the Internet:

- World-class multidisciplinary research
- Debate and formulation of public policy
- Conferencing and Communication

The Oxford Internet Institute has been made possible by a major donation from The Shirley Foundation of £10 million together with public funding totalling £5 million from the Higher Education Funding Council for England.

The Oxford Internet Institute is now registering interest from individuals and organizations keen to participate in Internet research and policy. Please visit our website at www.oii.ox.ac.uk for registration details and regular updates.

www.oii.ox.ac.uk





Oxford



Leiden



Bonn



Bologna



Geneva



Paris



Prague