AOL

broadband britain
the end of asymmetry?

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Every 12 seconds someone connects to broadband for the first time in the UK.[†]

There was a time when using the internet was seen as a niche, solitary pastime. Even today, there remains a stubborn image of the online medium discouraging social interaction. This research demonstrates that this perception is not only out of date but also diametrically opposed to reality. Broadband is enabling fundamental behavioural change. In findings that many will find counter-intuitive, this study shows that people are using the high-speed internet to break down barriers and explore a wider, deeper and more personalised engagement with the outside world.

A catalyst for behavioural change

Whether in entertainment, community schemes or through consumption of public services, broadband is encouraging participation in society and creating new levels of cultural involvement.

This trend is revealed by new research conducted by AOL in the UK, which shows that in many broadband homes the computer has broken out of the traditional confines of the study. Indeed, according to the research, nearly half of broadband households in the UK (46%) have moved the PC into their daily living space, with 28% saying they access broadband from their living room and 18% from their bedroom.

Broadband is becoming embedded in our daily lives. There are the first signs that through broadband, the PC can provide a focal point in the home, switched on as a matter of course in the same way as the television or radio might be.

Furthermore, greater affordability and more public access points mean that broadband is no longer the sole preserve of the affluent. Its impact is being felt at all levels of society, although there is still some way to go before the digital divide is fully bridged.

The shift in behaviour flows principally from the 'always on' and faster nature of broadband. As the technology becomes invisible, people are increasingly liberated to explore how it can help them pursue their own social and cultural needs. AOL's own data shows that broadband users spend significantly longer online than those on dial-up. And they are logging on when it suits them – polling for this research showed that some 59% of broadband users have logged on before breakfast, and 21% have surfed in the middle of the night.

Broadband is not creating numerous new activities, rather it is enabling people to transform the way they pursue existing interests and commitments. For example, 40% of broadband users say they are more likely to get involved in organising local events through the internet. This level of participation has implications for clubs, interest groups, government and anyone committed to re-invigorating communities.

Broadband Britain: The end of asymmetry

The research identifies the beginning of the end of asymmetry in Internet use. In other words, broadband has enabled a level of interactivity that means uploading and sharing information is as important as receiving it.

Our polling showed some significant results for levels of online participation:
- 57% of broadband users have created content to post online that they would not otherwise have created offline
- 59% of broadband users have posted comments on message boards
- 28% have their own website
- 56% post content more than once a month and 18% post content every day

Having always on access to broadband provides a low risk way of engaging with the world that we suggest is creating a culture of experimentation and empowerment.

Evidence of a social shift

Personal computers are becoming social computers. Our polling suggests that communities are increasingly facilitated by broadband – with 81% emailing people they would otherwise not stay in touch with and 26% using the internet to organise informal events.

[†]   Based on Ofcom's industry figures, October 2004

But beyond this, our research suggests that the end of asymmetry in Internet use is empowering people and increasing social participation. The report explores a number of examples – entertainment (using the specific example of the music industry), community and public service provision – to cite evidence of where UK life is being altered by broadband. We have outlined four principles to help navigate these changes:

1 Flexibility

One area in which flexibility may be particularly important is that of education. At notschool.org, academics are experimenting with provision for 'school refusers' in order that they may still learn, but from home within a safe and social environment. Mainstream developments such as the AOL Learning channel, where there is online access to teachers available to help with homework and give advice, also create an alternative space in which people can learn.

The government's current education priorities are to encourage more flexible school days for pupils, parents and teachers. The flexibility enabled through broadband is helping to reinforce a creative 'learn-anywhere' culture.

2 Personal support and engagement

Our polling found that 57% of broadband users had researched their own health or that of a friend or relative online. A pilot in Birmingham recently sought to extend the provision made by NHS Direct. Using digital television, callers to the service could see the nurse to whom they were talking on their television screen, together with diagrams and video clips to aid their own self-care or diagnosis. Not only was the service well-used and satisfaction high, NHS Direct found that the quality of communication possible meant that calls became shorter, allowing them to reach more people.

The possibilities presented by broadband – from video streaming to online support groups – have the potential to reduce the distance between citizens and public services. Broadband also has the potential to create confident and engaged patients, at a time when the Department of Health sees encouraging self-care as critical to the future of public health.

3 Community

Taking Neighbourhood Watch as a case study, the research demonstrates how broadband has the potential to empower and invigorate communities. Groups are increasingly using text message alerts, streaming video surveillance and online dialogue to deter crime. In this way, they help to reduce crime and the fear of crime together, building belief among them that they are safe and that they can fight back. In Gloucester, the Brunswick Square Central Lawn Association is using the Internet to target crime in the community through its Neighbourhood Watch initiative.

Broadband could increasingly enable communities to feel empowered to fight crime and tackle the fear of crime and become more resilient as a result.

4 Citizen leadership

As the recent US election showed, broadband is changing the way candidates campaign. We saw how the rise of broadband video and blogging - posting personal content onto the internet - led to a shift from party political broadcasts to party political networks and enabled a deeper kind of democratic conversation.

Could we be about to see a similar impact of broadband on the run-up to our own General Election in Spring 2005? This is particularly crucial with recent turnouts at such a low level in the UK, compared to records set in the US this year.

Some sectors in society have been slow to realise the implications of citizen leadership. Our research looks at the music industry as an example of how broadband encourages creativity and personal empowerment. For too long, the potential for sharing music online has been seen only as a threat and has been missed as an enormous opportunity. Blurring the boundaries between producers and consumers could expand our cultural horizons and reinvigorate British music. The research argues that organisations across the UK would do well to understand the lessons of the music industry and avoid repeating mistakes of the past.

Conclusion

We argue that to understand fully the power of broadband it is incumbent on policy makers, businesses, and community groups to ensure that broadband is at the heart of debate about the way public services are delivered, the way we engage in our communities and the interests we pursue. Our research and the examples we provide suggest that broadband is the catalyst for a social shift - exciting opportunities should not be missed by viewing this shift as a threat, or by failing to recognise its true value.

Broadband's greatest potential lies in the fact that it enables individuals to design and tailor their interface with society. The once insular and isolated activity of going online is now blossoming into external engagement and a deeper and more personalised relationship between individuals and society that must not be ignored.

'Our country and its people prospering in the knowledge economy… Increasing by £1 billion the investment in science…and ending the digital divide by bringing broadband technology to every home in Britain that wants it by 2008.'

Tony Blair, 28 September 2004

With this announcement at the Labour Party Conference, the Prime Minister made broadband technology an election issue. But while Labour has identified itself with the progressive potential of broadband, many questions remain about how such commitments will be taken forward.

Political priorities for broadband are worryingly simple – as many people as possible must have access to it at ever-faster speeds. But while broadband use and bandwidth rises steadily, changes in its social impact may be far from linear. Broadband may herald a tipping point in the internet's importance, as it shifts almost unnoticed from the periphery of people's lives to their centre. As it does so, it will disrupt the crude 'build it and they will come' attitude of public policy, raising questions about how broadband can be used to meet the disparate needs of Britain's citizens and communities.

Broadband is increasingly deeply embedded in our everyday lives. In a YouGov poll conducted for this project, we found that 59% of broadband users in the UK regularly log on before breakfast and 21% sometimes get up in the middle of the night to do so, just as they might to get a glass of milk. While the hype surrounding broadband has focussed on its speed, this means its users can be unhurried. Equally, while the technology allows broadband to be 'always-on', this does not mean always in use – it is the ease and flexibility of broadband that people appreciate, and which is increasingly allowing its users to take control.

As broadband becomes embedded in our lives, its social character is gradually emerging. The best way to understand this character is in terms of *the end of asymmetry* between the consumers and producers of broadband content, as the distinctions between them fade and as their levels of influence become increasingly equal. The notion of an end to asymmetry began as a technical one; the simple idea that as internet use matured, people might need as much bandwidth for sending information back up a pipe as they did for receiving it. However, this idea has today taken on a richer cultural significance, representing the notion that through broadband, people might become more engaged and more empowered.

In this paper, we trace this idea from its leading edge within the music industry, through to the future of public services and democracy itself. While music may seem far removed from the political cut and thrust, we argue it may contain important lessons for other creatives and public servants alike. We suggest that broadband will rapidly grow in political significance, making it possible for citizens to express their creativity and to communicate with one another independently of institutions. We suggest four principles that will emerge from the interactions between broadband and society, and to which public institutions and authorities will increasingly need to aspire:

- Flexibility
- Personal support and engagement
- Community
- Citizen leadership

From parents able to work at home to teachers able to draw on video-linked expertise and learning resources from across the world, the *flexibility* that broadband brings to both work and family erodes many of the parameters of collective provision that in the past we have taken for granted.

As 'always-on' becomes the norm, new standards of *personal support* may also emerge. Embedded wireless heart monitors and virtual PAs may see connectivity transform the way we tackle life's challenges, both large and small.

From groups of independent journalists, to those of new parents, to Neighbourhood Watch groups, broadband can help to strengthen new *communities* of all kinds. While politicians of every stripe are now seeking to make the individual the unit of focus for every public service, broadband may help to shift the focus back to the communities that they build.

Finally, broadband is increasingly helping *citizen leadership*, allowing networks of 'expert patients' to ease doctors' workloads and encouraging a culture in which the decisions of public services must be negotiated with those they serve.

To make the most of broadband, we must engage much more with the public and the uses they make of it. As much as the technology itself, it is social innovators who are driving broadband's impact. The web-based community musician and the student ebay entrepreneur have as much to teach us about the role of broadband as do our engineers and technicians. The hook for politicians may be that broadband also seems to make it easier to learn from just these people.

The Broadband Britain research project is being carried out in partnership with AOL and the ethnography specialists Ideas Bazaar.

Phase 1 of the research has involved opinion polling and desk-based research to assess the current state of Broadband Britain and to build some hypotheses about its future direction. The polling by YouGov involved 4,000 broadband and dial-up internet users.

Phase 2 of the project is about testing out these hypotheses with those people who use broadband. We have wired up a number of households across Britain with high-speed internet access, and over the coming four months will observe the uses they make of it and the effects that it has on their lives.

Phase 3 of the project is to synthesise these two elements of our research, learning the lessons of our ethnographic work and applying them to the landscape we aim to flesh out with this paper. This will culminate in a final report, to be published in spring 2005.

As an introduction to this work, it is worth foregrounding some of the key findings from our opinion polling:

- 59% of broadband users have logged on before breakfast
- 21% have got up in the middle of the night to use their broadband
- 59% of users have posted comments or opinions on websites
- 54% had uploaded photographs onto the internet
- 62% of users believe that it is not very safe to allow children to use chatrooms
- 81% of broadband users email people that they would not otherwise keep in touch with
- 94% believe that internet banking is safe or very safe
- A quarter use broadband to organise get-togethers online. While most of these are informal and social, a significant number are political, community or sporting events.

three phases of the internet's development

Our research suggests that broadband is finally helping to build an internet that works. But it is vital to understand where this story has come from, as part of the arc of the internet's trajectory.

Phase 1: Great expectations (1994-2000)

For business leaders and politicians, the promise of relentless progress is irresistible. Back in 1994, the launch of Netscape's web browser spawned a fervour of hope and expectation about the internet, which was sustained for at least six years.

In the commercial sphere, this saw inflated profit forecasts and massive venture capital investment. In the 'new economy', conventional models of production and valuation were viewed as redundant and outdated. A strong arc of technological determinism assured people that this was a boom that wouldn't end.

This story of relentless progress travelled with equal ease into the public policy arena, where the growth of the internet was allied to political narratives of modernisation and improvement. The internet was presented as a panacea for social ills and economic growth.

Most clearly, a rather deterministic sense that technology was driving social change shaped understandings of how the internet would be used. People's lives were to be changed beyond recognition. As a result, alongside the hope and optimism that surrounded the internet, some fears were expressed about negative impacts on community and social cohesion.

Phase 2: Deflation and delivery (2000-2004)

In the spring of 2000, the optimism and speculation of the boom was brought to an abrupt end by the crash of the NASDAQ. If the boom had been about the willing suspension of disbelief – about notions of value, profitability and the way people live their lives – the crash was about the reassertion of more concrete and accepted norms. Across commercial, public and domestic uses of the internet, providers sought to focus on the basics of access and delivery.

For ISPs and telecommunications companies, the period saw a strong focus on the basic infrastructure of the internet, and on technical issues of access and regulation. In the policy sphere, publicly at least, bad news meant no news. Tony Blair, who made numerous speeches about the internet in his first term, has barely mentioned it in his second. George W. Bush famously mocked Al Gore for a claim that he had never made – that he had 'invented the internet'. The internet rapidly turned from a political asset to a political liability.

Nowhere is this shift better demonstrated than in the changing role of the UK's e-Envoy. This began, under Alex Allan, as a wide-ranging, highly strategic post, buttressed by regular prime ministerial contact. Its remit was to lead the digital transformation of government and of society at large. Under Andrew Pinder, in the aftermath of the dot-com crash, the role was downgraded and its responsibilities were chipped away at, until it focused primarily on the delivery of electronic government and public services. Then in May 2004, the e-Envoy role was scrapped altogether, and replaced with the more managerial role of Head of e-Government. Government targets for electronic public services, which began as a spur to further, more ambitious programmes of digital transformation, have become the outer limits of short-term governmental ambition.

For some users of the internet, this more sombre mood reflected their own experience. For many still using dial-up, the lack of speed and limited applications meant that it remained marginal or peripheral to many aspects of their lives. However, for many others, the internet was quietly bedding down in their lives, laying the foundation for further development.

Phase 3: 'The more virtual the more real' (2005 -)

Yet belying this story of boom and bust, the actual growth in internet use has been remarkably steady. In the case of broadband take-up, it is following a natural technological diffusion curve, but at a faster rate than most consumer technologies over the last 60 years, with the exception of black-and-white televisions and DVDs.'[1]

In 2005, three important milestones coincide:

- Due to progress in securing rollout of broadband infrastructure, the problems of access will largely have been resolved. A year from now, BT aims to have over 99% of homes within the reach of a broadband-enabled local exchange;

- The government's 2005 targets for access and online public service are up for renewal and renegotiation;

- And the General Election represents an opportunity to rethink the place of broadband and digital technologies in a third-term Labour government.

These milestones, set against the backdrop of rapidly increasing broadband take-up and use, mean that we are now on the cusp of an exciting new phase, in which the potential of broadband can be more fully realised and embedded in public policy.

All of the infrastructure put in place during the past five years of consolidation may now be about to deliver on the internet's promises. However, 'the more virtual the more real' is a crucial phrase. Like any tool, broadband is only as good as the uses to which it is put. For the internet to deliver, social innovation must accompany technical innovation, and the two must grow together.

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[1] Robert Pepper, Chief of the Office of Plans & Policy, US Federal Communications Commission (FCC), comment to Oxford Internet Institute

music leads the way

The earliest glimpse of the end of asymmetry between broadband's producers and consumers can be seen in the world of music. While it may seem peripheral to national politics, the story of music in 2004 is one from which our creatives and public servants can learn a great deal.

In 1770, when Mozart was twelve years old, he and his father visited Rome, and the Sistine Chapel at St Peter's. There they listened to the Miserere, a famous piece that had only ever been heard within the chapel. Its performers were forbidden on pain of ex-communication from sharing its secrets with outsiders. On returning home, Mozart sat and wrote out what he had heard, bar by bar, part by part. A few days later Mozart returned, with his manuscript rolled up in his hat, to make his corrections.

In the following months, Mozart met a noted historian of music, who subsequently published the Miserere for the very first time. In the years following, it was published many times in England and across Europe, ending the monopoly held by the Pope over the work.

Musical trailblazers have always created controversy, temporarily obscuring their creative contribution. In the time of Mozart, the loss of the Pope's monopoly created widespread outrage but music continued to grow and develop. Today, some are fearful of broadband's impact, but music's long-term prospects look healthy. In particular, power is again shifting from the institution to the individual, unlocking opportunities for people to enjoy and create music. It is this that puts music at the leading edge of *the end of asymmetry* between producers and consumers. It is in broadband's cultural impact that we will see its lasting effects on music, and from this there is much for our cultural sector and for our public services to learn. In particular, the example of music is a lesson for the rest of the UK in the rising importance of creativity and community.

The new score

The public debate about music has focussed on the instruments we use to the exclusion of the radical change in the arrangement of the players. Clay Shirky makes a telling observation: 'despite the fact that it is still possible to make gin in your bathtub, no one does it, anymore. After Prohibition ended, high-quality gin became legally available at a price and with restrictions people could live with. Legal and commercial controls did not collapse, but were merely altered'.[2] Equally, as limits on bandwidth fade, the real story is not about music that is free but music that we value, and as consumers grow in power, our ability to create this value may be set to grow.

Change in how we listen to music is certainly happening at speed. In just one month during 2003 in the United States, 49% of 12 to 22 year-olds downloaded music. Half of these downloaders now say that they buy fewer CDs. In the UK, Tower Records Europe has gone into receivership, Andy's Records has closed down and WH Smith has stopped selling singles.[3]

However, while we have been quick to point to victims of peer-to-peer file-sharing, the scare-stories have been over-done. While file-sharing continued to rise, last year over 150 million songs were downloaded from Apple's iTunes store. Meanwhile, research suggests that as often as we substitute downloading for buying a CD we buy a CD *because* we downloaded it.[4]

In the way we listen to music, we have always traded off between ease of access and the price we are willing to pay. Covering each extreme, for decades radio and records have not only co-existed, they have supported each other. In the past, radio provided free music for when we were busy, on the move or wanted the very latest songs. Today, as streaming downloaded music becomes increasingly easy, broadband-enabled 'podcasting' is increasingly filling this niche. However, this doesn't mean we can always find what we want when we want it. Given the time people have to spend in order to download tracks 'for free', as Apple's Steve Jobs put it, while you may save a little money on Kazaa, 'you're working for under minimum wage'.[5] In supporting consumers – from suggesting tracks they may like, to helping them re-mix them to introducing them to like-minded music fans – there is much value for organisations to help to create. While for some organisations, therefore, the message is 'adapt or die', the rewards for doing so, both for them and those they serve, may be great.

Music's end of asymmetry

While the imperative of 'adapt or die' is familiar across our institutional landscape, this degree of clarity about *how* the world of music must change certainly is not. There is much that others can learn from the rising importance of creativity and community within the world of music.

Firstly, when musicians and fans alike can contact one another directly, sharing work, critique and enthusiasm, *creativity* grows in importance. The new reciprocity to the relationship between artists and audiences makes it easier for them to cut commerce out of the loop. As a result, the entertainment industry will have to work harder to meet the diverse needs of both, demonstrating the ways in which they foster and enable creativity.

Chris Anderson argues that the world before broadband was characterised by 'hit-driven economics', with choice constrained by shelf space.[6] His research found that 'the market for books that are not even sold in the average bookstore is larger than the market for those that are'. As limited shelf space is increasingly replaced by unlimited bandwidth, the way we experience music will change. Whatever our taste, we will expect them to be catered for. This goes beyond what we listen to; from creating our own music to attending live concerts, we will expect the organisations with which we interact to provide comprehensive personal support. We will expect our creativity to be their priority.

The industry also has increasingly to acknowledge that it has a responsibility to its community, as well as to individuals. Music, like broadband, is consumed socially – its popularity grows through social networks and its value is determined by social networks. As Sky grew by placing access in pubs and helping communities of interest to grow around football, for example, so this process will be fundamental to the growth of broadband. Record companies may increasingly stand or fall on the communities they help to develop and facilitate.

While the rise of peer-to-peer exchange has been described in cataclysmic terms, therefore, the leading lights of the musical world are showing the potential of a response grounded in innovation and reform. However, while this may comfort those in other sectors, the speed of broadband's impact has been striking. Business propositions that were the norm three years ago are today laughable to many consumers. While the direct effects of broadband have been important, on the technology through which products and services are delivered, its indirect effects have been even more so, on the confidence of individuals and communities and the demands they make. While we may flinch at the idea of the doctor learning from the drummer, there is much here for organisations across Britain to ponder.

[2] Clay Shirky in Oram, A. (2001) *Peer-to-Peer: Harnessing the power of disruptive technologies* (O'Reilly)

[3] Music tank event (April, 2004) *Music Retail: dying or diversifying* (http://www.musictank.co.uk/events_retail.htm)

[4] Felix Oberholzer-Gee and Koleman Strumpf (2004) *The Effect of File Sharing on Record Sales* http://www.p2pnet.net/zero/FileSharing_March2004.pdf

[5] Quoted in Anderson (2004)

[6] Chris Anderson (October 2004) 'The Long Tail', in *Wired Magazine* http://www.wired.com/wired/archive/12.10/tail.html

the 'new creatives'

The trend towards individual empowerment, of which music is at the leading edge, can increasingly be seen across our society. New alliances between creatives and communicators are emerging. In the process, broadband is blurring the boundaries between producers and consumers, and beneath this blur lies a shift in power from the institution towards the individual.

Broadband makes many components of our everyday lives easier to store and share. As these artefacts – from calendars and CVs to ideas and opinions – become increasingly connected, they help people to make contact with one another.

Soon, we may think of life before broadband as we do life before currency. Without currency, personal wealth was insecure and bulky to store and exchange. With the arrival of cash, personal wealth could work for its owners, pooled in banks and invested on their behalf. Today, as a result, we take it for granted that public institutions handle personal transactions.

A pro-active public

Users of broadband are increasingly taking advantage of this shift, growing in confidence and voice. One recent study found that as many as 44% of US internet users have posted content online, of which 21% had posted photos and 13% maintain their own websites.[7]

Our research in the UK found that 59% of broadband users had posted comments or opinions on websites and 54% had uploaded photographs. However, there was also a huge variety in what people were using their broadband to publish, from poetry to football match reports to video and goods for sale. Characteristics of internet experts also seem to be spreading to popular use, with 28% of broadband users maintaining their own websites and a full 18% posting something online everyday.

There are now four million weblogs, with 12,000 new ones being added every day. As of 6th October 2004, there were approximately 400,000 posts created every day in the 'blogosphere', which is an average of around 4.6 posts per second, or over 16,000 posts per hour.[8] As this army of online journalists grows, our research found that in the UK 24% of broadband users had posted reviews online. How might Britain's writers or performers feel if they knew that the pool of would-be reviewers was growing by as much as 10,000 people per week? The research also suggested that this was much more than people switching existing behaviour online, with 57% saying that they would not have published this content were it not for the internet.

Enabling Creativity

The rise of public banks created a whole range of new occupations and professions, from fund managers to cashiers. As more of the components of our lives are self-created and stored publicly, so we are seeing further changes to our social and professional worlds. In particular, this trend is helping to boost the work of those who use broadband to express their creativity. Whether it is photographs, CVs or music, once a critical mass is stored publicly, new creative opportunities are opened up.

New pro-activity on the part of citizens has huge consequences, which are only just beginning to become visible. For example, independent bloggers now wield an influence that is beginning to rival long-established newspapers. John Batelle argues that online subscription magazines and newspapers should let authors of weblogs link directly to their content, allowing their readers to see articles for free.[9] This extension of reach, he argues, would far outweigh the loss in revenue, because people subscribe to content recommended by those they trust. In journalism, broadband is helping to create a world in which a 'closed shop' is no longer an option – not only is it possible to blur the boundaries between readers and reporters, it is increasingly necessary.

Equally, online photo albums are playing an increasingly important role. Sites like Flickr (www.flickr.com) or Ploggle (www.ploggle.com) enable users to store photos online, and make them public if they so choose. As a result, bloggers have access to an ever-growing bank of photographs. In the aftermath of the bombing of Jakarta in September 2004, blogs had pictures of the scene before major news organisations, providing authentic material for unaffiliated internet journalists.[10]

For those at the leading edge of these shifts, this is a story about the end of consumption – in cultural terms, the argument seems to run, we are all producers now. However, this can create interminable discussion about the time and inclination that we all have for cultural creation, which misses the really significant factor. Most importantly, this is a shift in power; communicators and creatives – like musicians and their audiences – can increasingly create value together, independently of intermediaries, shifting the balance of power between individuals and organisations.

7   Pew Internet and American Life Project, *Content creation online*, http://www.pewinternet.org/pdfs/PIP_Content_Creation_Report.pdf
8   Dave Sifry, Technorati, http://www.sifry.com/alerts/archives/000387.html
9   John Battelle's blog, http://battellemedia.com/archives/000957.php, [via Doc Searls' weblog]
10 Dan Gilmor of the San Jose Mercury News, quoted in An Update From the Digital World: October 2004, Morgan Stanley, http://www.morganstanley.com/institutional/techresearch/pdfs/dw_syndication1004.pdf

from personal computers to social computers

While these new creative alliances are important, there is also a strong community dimension to broadband's likely impact. As these alliances develop, in some cases they are moving far beyond the merely contractual, becoming relationships that are valued in and for themselves. In doing so, not only can broadband foster existing communities, but it can help new ones to develop, creating cultures of support or encouragement around particular identities and activities. In so doing, broadband may make a small contribution to finding social and organisational forms in which individual freedom and community strength can grow together, and for the politics of today, this is truly significant.

Supporting communities

In the early years of the internet, the fear was that online communities would bring an end to face-to-face communication. In the second phase of the internet, the failure of some early online communities made it seem that online communication had nothing to offer community. Today, for many people, broadband use and social interaction are becoming increasingly intertwined.

In 1997, a development in Toronto sought to fit broadband access into each new home. In fact, only 64 of the 109 family homes in the suburb were ever connected up. Whilst this may have disappointed some of the suburb's newest residents, it offered anthropologist Keith Hampton an opportunity to compare the social behaviour of wired and unwired households. Hampton's findings were unambiguous; 'wired residents knew three times as many neighbours, talked with twice as many and visited 50% more of their neighbours compared to non-wired residents.'[11] As with other studies, it seems likely that some of this interaction was triggered by broadband novices asking other locals for help, but that many of these relationships blossomed into broader friendships.

Both communities with roots online and offline are increasingly open to combining virtual with face-to-face contact. On the one hand, offline communities are increasingly being drawn online, as groups of friends stay in touch through 'suites' of technologies to which they have access. For example, camera phones, digital cameras and the internet have combined to make sharing photos one easy way of keeping in touch. The Flickr photo website, like a growing number of websites, has integrated its service with social software. So if you're back from a party, but don't have a photo of that priceless moment, search the photos of your friends[12]. As social software becomes embedded in the architecture of communities, groups as diverse as expectant mothers and victims of bullying are looking to broadband-enabled communities for sources of support.

On the other hand, while online communities have often been highly insular, protective of the very separate roles that participants play, they are increasingly opening up to offline activity. The phenomenon of the 'flashmob' began as a fairly obscure social practice, using mobile phones to convene quite anarchic gatherings and parties in unexpected places at a moment's notice. Today, BBC3 has used this technology to create renewed interest in classical music through Flashmob the Opera.

New community architecture

Broadband, therefore, may have a role to play in helping to foster and maintain communities. This has important implications for all those who seek to build communities, and as the example of the music industry shows us, perhaps for the vast majority of organisations. It also raises wider public policy questions about planning and service delivery.

Our research found that 81% of broadband users email people that they would not otherwise keep in touch with. Perhaps more surprisingly, a full quarter use broadband to organise get-togethers online. Most of these are informal and social, but a significant number are political, community or sporting events. In addition 27% have researched joining a club or getting involved in an offline activity (42% of 18-29 year olds).

Indeed, for 40% of broadband users, access to broadband makes them at least a little more likely to get involved in organising local events (only 4% felt that it would make them at all less likely). In this context, broadband is an important community asset not only for the services to which it gives them access but also for its contribution to their capacity to communicate and organise with one another.

It is important to set this against further findings from our research. Broadband users are increasingly integrating it into the architecture of their houses and of the technology within them. From being the preserve of the study, today broadband is moving into the sitting room. While for 24% broadband is still confined to the study, for 28% broadband access is in their living room, and for 18% it is in their bedroom. Furthermore, 54% of broadband users have a TV in the same room when accessing the internet.

In a world in which broadband is increasingly embedded both in community life and in the architecture of our homes, it will quickly rise up the priorities of planners and developers. With 500,000 homes being built in the Thames Gateway alone, there are huge opportunities to help people to build these new developments into supportive communities.

[11]   Will Davies (2004) Proxicommunication, iSociety
[12]   Andy Ihnatko, (21st September, 2004) 'Flickr photo tool has it all and more', *Chicago Sun-Times*

public services in broadband britain

The effect of broadband on the importance of creativity and community, most visible in the world of popular music, has huge implications for the ways in which we organise collective provision. To this end, we suggest four principles, which broadband will help to promote and to which public service may increasingly need to aspire; flexibility, personal support and engagement, community and citizen leadership.

Polling for this project found that already, 73% of broadband users have visited national or local government websites. As e-commerce becomes part of our lives, growing numbers of Britons may simply assume that they can function effectively as citizens online. These principles help to frame a broader question: while the government may be ready for the roll-out of broadband technology, is it ready for its social and cultural effects?

Flexibility

Many of the limits of our public realm are receding, from cultural norms and moral taboos to notions of the private. Communications technology is at the heart of this process, allowing connections to be weaved between disparate times and places. In this process, public discourse is primarily focused on the associated danger of a sleepless, panopticon society. However, the opportunity is to craft public services far more open to and supportive of those that in the past they have served least well.

One area in which this flexibility may be particularly important is that of education. Firstly, broadband is changing the professional experience of teachers. For example, in Westminster Education Action Zone, teachers increasingly use their broadband connections to store teaching resources and lesson plans online, sharing and developing them collaboratively. What was once a very private profession is increasingly being opened up, allowing teachers to learn from one another.

A similar shift at Greig Academy in Haringey is enabling science teachers to build up video libraries of their demonstrations of experiments in public. At home, the school's science teachers can download and add to their collection of footage, building it into lesson planning and preparation.[13] They have found that the key benefit is that demonstrating lessons using video is much quicker - it's the 'here's one I made earlier' of the science classroom. Their use of the technology increasingly allows learners to actively participate, and play a stronger role in directing their own learning.

This is a telling example – given the time to explore the potential of a technology together, teachers have discovered a benefit for their pupils that they could never have predicted. Equally, having begun primarily as a resource for teachers, the East of England Broadband Network (E2BN), is enabling schools to pool teaching resources, using video conferencing to provide a range of minority subjects across a locality.

In other words, as broadband helps teachers to be more creative, in turn it helps their students to become more creative. Students in north London have taken this one step further. On the Hands Up website for example, created by two seventeen year-olds from north London, teachers and students alike can download resources for citizenship classes, created by the girls and based on their own work and experiences.

This feature of working flexibly raises larger questions about the future of public provision. At notschool.org, for example, academics are experimenting with provision for 'school refusers', in order that they may still learn from home within a safe and social environment. The E2BN model already raises questions about the provision that might be made from within school for excluded pupils, or those away from school through ill-health. Already, the AOL Learning channel includes online access to teachers able to help with homework and give advice, again creating an alternative space in which people can learn. It may be that the real benefit of a 'learn anywhere' culture, far from that of convenience and mobility, may be the ease with which it is possible to build provision in the places learners feel safest and happiest, whether a sports centre or a dance studio.

Flexible working is a means not an end. As ever, the challenge here is to use the flexibility broadband affords not simply to do things better but to do better things. Work with pupils, patients and other service users, especially those served least well by the one-size-fits all models of today, to gradually transform the ways in which services are provided, is beginning to show the way forward.

Personal support and engagement

Broadband brings the prospect of far greater personal support and engagement within public services. However, in building this capacity, broadband will add a new dimension to questions of personal autonomy and responsibility. Early engagement with these questions can help public services to build in support where damaging gaps of skill and knowledge could quickly emerge.

The notion of personal contact has gradually risen up the political agenda. Most recently, the government announced that every community would soon have access to its own local policing team – that they will know their names, their mobile numbers and their email addresses. However, while this 'reassurance policing' may improve reported levels of satisfaction, the real challenge lies in providing a better service.

The contribution that personal support and engagement can make to the quality of services lies in the level and quality of interaction between the public and public servants. For example, in health care, our polling found that 57% of broadband users had researched their own health or that of a friend or relative online in the last year. In the US, this has grown to as much as 80%.[14] By doctors' own admissions, this is radically changing the way they relate to their patients, who routinely arrive with swathes of documentation, accessed from home.[15] If community policing teams and the like are to improve services, the challenge is not to 'reassure' these newly-informed citizens into passivity but to unlock the potential it represents, involving them in the services they receive.

[13]   From research for Craig, J, with Lownsbrough, H. and Huber, J. (2004) Schools Out: Can teachers, social workers and health staff learn to live together (Demos)

[14]   Hobsbawm, A. (2003) 10 years on: the state of the internet after a decade (Agency.com)

[15]   Ibid

However, whether in health, education or other public services, this is a challenge to established doctrines and cultures. A study by Deloitte & Touche reported that 66% of US patients did not receive any literature about their or their child's condition (and only one third received information about their medication)[16].

However, glimpses of this radical future are already with us. In Birmingham in 2002, a pilot sought to extend the provision made by NHS Direct. Using digital television, callers to the service could see the nurse to whom they were talking on their television screen, together with diagrams and video clips to aid their own self-care or diagnosis. Not only was the service well used and satisfaction high, NHS Direct found that the quality of communication possible meant that calls became shorter, allowing them to reach more people[17]. With the recognition in November's White Paper on Public Health of the importance of personal support and online guidance, it seems likely that the national importance of this kind of provision will only grow.

The challenge for the government is to find forms of support that people can shape to fit their own lives. For example, work is already being done to explore the potential of wireless technology to create remote heart monitors for post-operative patients. This 'always-on' technology would ensure support was on hand when it was needed, without invading people's lives. In this context, we might speculate about how long will it be before sufferers of obesity can use embedded sensors to record and dramatise for them their daily lifestyle choices.

On the market already is a wi-fi pill, capable of monitoring the vital signs of those who swallow it, and relay them to a local server. The pill was developed for the US army, but is now being used by the likes of the Canadian Olympic triathlete team.[18] Technologically, therefore, the limits to self-diagnosis are receding far more quickly than we can imagine systems for making use of them. But how important could self-diagnosis be to the future of the NHS? Since its inception, the number of NHS professions has grown from a handful to well over sixty. As this distribution of labour continues, is it possible to imagine it starting to include patients, members of the public who have become experts in their own and related conditions. What kinds of networks of service provision will broadband be helping us to navigate in the future?

As this embedded technology spreads, perhaps into our homes or our clothing, this kind of deep involvement with our own health has the potential for lasting growth. Part of its potential lies in boosting the faith and trust citizens feel in their public servants. However, this is only part of the story. It also has the potential to help people lead healthy, fulfilled and independent lives, and it is on this that we must capitalise. Can we use this technology to help people learn how to live and eat healthily? Can we use broadband to change the quality of people's relationships with public servants, as well as the ease with which they access them?

Community

While governments have long been struggling with declining trust and satisfaction, this problem now increasingly afflicts companies. While the reliability of products has risen, for example, in many cases levels of satisfaction with them have fallen. Just as the image of the police is damaged by the ever-increasing media attention on crime, so our growing army of online reviewers will highlight flaws in any product, from cameras to holidays.

Just as software companies are learning to embrace their developer communities, so all kinds of organisations increasingly have to do the same. As broadband spreads, the same implication seems to be holding for many public services. Just as Linux and ebay are only as strong as the communities they develop and facilitate, so we may increasingly come to feel this about our public services.[19]

As we saw earlier, social software is now included in photo album websites, to make them more searchable. This is just the beginning. As this software is integrated with GPS systems, for example, sales reps may be able to tag their favourite B&Bs for one another, creating ever-evolving maps of Britain from which they can draw trusted information. In this world, success in the hotel trade becomes about keeping a community happy.

Today, there is research that suggests that this is already the case, for example, in elderly care, where a supportive social network is vitally important.[20] As social networks become far more visible, will we find that the same is true of policing or education, for example?

Already, online communities for people with specific health problems, new parents or victims of bullying are helping to extend just this kind of phenomena. For example, OCD-UK, a new national charity for people suffering with Obsessive Compulsive Disorders and those who care for them has put online bulletin boards to good use. Capitalising on the trust and sense of community this has created, they plan to run regular online therapy sessions, bringing in national experts as participants.

[16] Quoted in 10 Years On, Source: Plunkett Research, Ltd., 2003

[17] Case studies available online (http://www.wmas.nhs.uk/nhsd.htm, http://www.pjb.co.uk/t-learning/case16.htm)

[18] http://www.eurekalert.org/pub_releases/2004-10/mmci-v-101104.php [via BoingBoingBlog]

[19] This point has been made most influentially by Moore, M. Creating Public Value

[20] 'Social networks and the prediction of elderly people at risk', G. C. Wenger in *Aging and Mental Health 1 (no. 4)* (1997), quoted in 'Your Friendship Networks' by Perri 6 in McCarthy, H., Miller, P. and Skidmore P. (2004) Network Logic (London: Demos)

In contrast, many neighbourhood organisations look today as they might have done 100 years ago. Increasingly, the question must be 'why?' Envision is a sustainable development charity that works with sixth-form school pupils. It helps them to create websites that connect them to local people, other young Envisionaries' across London and interested observers all over the world. The results are empowering: helping young people to co-ordinate the work that they do in a way that is independent of school structures and to make contributions to their local area more easily and effectively than they had been able to before. Projects have ranged from renovating derelict public spaces to installing solar panels to public buildings. The approach of its staff is not directive – to seek simply to 'deliver' these changes – but facilitative, seeking to build relationships between young people that are grounded in sustainable development.

Today, for example, Neighbourhood Watch is changing. Once meeting in village halls to distribute posters, local people are now getting active. Groups are increasingly using text message alerts, streaming video surveillance and online dialogue to deter criminals. In this way, they help to reduce crime and the fear of crime together, building the confidence within their community that they are safe and that they can fight back. For example, Brunswick Square Central Lawn Association in Gloucester has recently received an AOL Innovation in the Community Award to fund a new Neighbourhood Watch bulletin board and newsletter on its Web site, including home security tips and emergency telephone numbers.[21] In East Malling in Kent, two-way radios are being used in conjunction with camcorders, both to reassure residents and to gather evidence on known offenders.[22] As broadband technology becomes increasingly ubiquitous, combining these centralised and peer-to-peer approaches to community-led crime prevention will become increasingly easy, making it an area in which rapid innovation in years to come seems likely.

How far can this go? Perhaps a combination of voice over IP and 3G location-based technology will create a peer-to-peer 999 service. This could help farmers in accidents or who are victims of crime to contact the three people closest to them, as well as a more distant emergency service. As surveillance technology continues to fall in price and Neighbourhood Watch schemes come to resemble do-it-yourself MI5s, so private security will become a challenge to the sovereignty of law enforcement agencies locally just as it is nationally.

While these are for the future, the lesson is beginning to be learned by public services. The NHS's 'expert patient programme' develops the expertise of those who have had a particular condition for a long time, and managed it successfully. Understanding that people learn best from those closest to their own situation, with whom empathy is easiest, the NHS partners these people with those who can benefit from their advice and support. In this context, broadband seems to offer a possible boost to this approach, offering anonymity and instant access to the medical knowledge base. With broadband and webcams in every home, what is the limit of this kind of brokerage role? Could we use online fora to distribute medical knowledge and advice? What kinds of groups would develop as a result?

Large cities are economically resilient places. When one industry declines, another grows up. Why is this? Two reasons stand out; city life has intrinsic value for people, so that they will adapt to stay and cities have a critical mass of different talent, ideas and energy. As public services come to rely on their own virtual developer communities, can even very remote parts of Britain start to develop these resilient characteristics?

Can we imagine a Linux development community bidding for National Lottery funding? Two hundred years ago, one community dispersed across the country had a second electoral vote – Oxford and Cambridge Universities had members of parliament of their own. As our membership of multiple communities rises in political significance, how will our decision-making structures respond?

Citizen leadership

Broadband is connecting computers, and increasingly all kinds of devices, across the UK. As a result, the means of virtual production will increasingly be in the hands of the people, but they will be privately owned. This may have dramatic consequences for the ways in which services function and the ways in which decisions about them are made.

For example, for record companies, file sharing is a serious problem. However, the quality of the information that it simultaneously creates is irresistible. Even while suing those who enable downloading, record and radio companies are paying large sums for real-time information about who is downloading what, and where they live. Such information has turned the internet into the world's largest musical focus group. Together with exchanges of play-lists as well as music itself, this is shifting control over musical taste and fashion from those who distribute music to those who play and create it.[23] Increasingly, the policies of radio stations and record companies will be made in collaboration with those who buy their music.

This striking example raises questions about the future of public services. Transferring knowledge about teaching or medicine has always been extremely complex and difficult. However, the tools of these trades, as we have seen, are increasingly as transferable as MP3s. Could mapping exchanges of lesson plans nationally tell us what schools are prioritising or finding difficult? Could the foci of public health campaigns emerge from the questions we ask one another online?

[21]   www.brunswicksquare.org.uk

[22]   See http://www.neighbourhoodwatch.net/motorola/scheme.htm

[23]   Wired Magazine article, 'Big Champagne is watching you', http://www.wired.com/wired/archive/11.10/fileshare.html

One area where similar suggestions are already being made is that of road maintenance. As they become more and more accurate, tiny and cheap, broadband-enabled sensors may literally be everywhere. Connected to cars' GPS systems and anti-lock brakes, a near-accident on a local road could be relayed immediately to the council, and automatically allocated to the route of a salt truck that day.[24]

Another important area may be policing. Today, strategic decisions about police deployment are made by a few senior officers. As broadband and location-based software converge, officers will be able to use wireless PDAs that automatically log events' location and time. This has the capacity to generate evolving pictures of crimes over a series of weeks, which can help to show up patterns that in the past remained hidden. With the government's emphasis on community policing, there is also the potential for citizens to contribute to this database, unlocking the intelligence of a whole community about when and where to deploy police resources.

Critics of the idea that broadband can contribute not only to the services we receive, but also to the collective decisions we make about them, fear the growth of democracy through plebiscite, where monumental decisions are just a click away. In this scenario, what is unnerving is just how easy it is to choose. However, if access to the resources at each citizen's disposal had to be negotiated, this might create a much deeper kind of democratic conversation. For a driver to accept these sensors on their car, they would really have to feel a commitment to their local authority.

Until very recently critiques of central public provision were the preserve of academics. Social capital theorists, for example, like Robert Putnam, argued that broadcast technology was a factor in focussing our attention on broadcasting to everyone at the expense of talking to one another. As the rise of broadband starts to swing this pendulum back, this critique is beginning to feed through into the strategies of political parties.

In this year's American presidential election, for the first time in decades, local political activism was the focus of national attention. However, while this was billed as a return to politics as it had always been, the way communities organise has changed forever. While big budget television commercials remained as important as ever to the candidates, the ways in which they are shared have changed. Some were not even broadcast on television, but shared on the internet like chain letters. Others were shown face-to-face in the street, on activists' PDAs.[25]

Democrats, most famously Howard Dean, used moveon.org and meetup.org to build support and organise meetings. Perhaps most dramatically, bloggers drew in experts from across the world to prove that documents used by CBS anchorman Dan Rather to question George W. Bush's National Guard service were false. From giving individuals a say in the shape of the media, blogs had provided groups with a right of political initiative, a right of initiative in the democratic process itself.

From road maintenance to our democracy itself, as broadband helps to distribute leadership across our society, much may change. While this may chime with nostalgia for small town politics, the democratic benefits hang in the balance. As Douglas Rushkoff argued recently, in the shift from party political broadcasts to party political networks, the declining need for a single conversation or message may blunt the force of democratic scrutiny. As with all four principles, the challenge is to adapt, and to shape them to public benefit.

[24] http://www.trainingmag.com/training/reports_analysis/feature_display.jsp?vnu_content_id=1000617302
[25] http://www.pbs.org/wgbh/pages/frontline/shows/persuaders

public value and social innovation

In a Leicestershire school, the rules say that phones, especially camera phones, are not allowed. Like all schools, they worry about pupils communicating with people off-site, and in particular, with drug dealers and other unsavoury individuals.

At the end of a maths lesson, a teacher sees a pupils playing with a camera phone, while the rest of the class are still dutifully copying down their homework from the board. The teacher decides to pounce. The pupil protests, 'well, you asked me to copy down the homework, so I did.'

What should be the first step in trying to unlock the benefits of broadband for the public realm? This educational example shows that the capacity of organisations to respond – to make solutions out of potentially disruptive technology – may lie at the heart of an answer to this question. So how can we build this capacity to respond to the disruptions that broadband will inevitably create? The answer lies in two features of the technology itself; its ability to combine convenience and adaptability and its potential to create cycles of public engagement and technical improvement. Broadband has the potential not simply to demand social innovation but in many cases to improve our capacity to enable it.

A culture of experimentation and dialogue

To find social uses of disruptive technologies requires cultures of experimentation and dialogue. At its best, broadband has the potential to be both convenient and adaptable, and it is only by exploiting these twin benefits that we can start to develop these cultures.

For example, a modern executive car is very convenient. It very rarely goes wrong, and will ferry its driver hundreds of miles quickly and smoothly - the luxury for their owners is that they can take them for granted. However, to change the oil or tinker with the tuning requires an expert. A mobile ringtone is today highly adaptable. Having given away the source code, the industry has helped thousands of people to craft their own, with relative ease. But, of course, we cannot use a ringtone to achieve a great deal in life. Ringtones, nevertheless, are evidence that technology works best when it is our slave and not our master.

Broadband has the potential to be both very convenient – enabling us to do a vast array of tasks with great ease – and very adaptable – helping us to change what we do and how we do it. In so doing, it has the potential to give its users both the confidence and the control they need to improve their own lives.

For example, mysociety.org is a website with a very broad aim: to create internet projects that help people, at very low cost per person. The site serves a place where people, no matter their idea, can log it, search for support and would-be project partners and critique and add to the ideas of others. Their second project is to be Pledgebank, which 'allows anyone to say "I'll do X if other people also do X", for example "I'll write to my councillor if 5 other people on my street do the same'.

Only by developing more of these adaptable, convenient tools can we help communities to find their own uses for broadband. The best way to ensure broadband's value is precisely this – not to gamble on futurology but to develop places where communities can themselves make broadband work for them.

A virtuous circle

Broadband also has the potential to develop our capacity to work in this way by helping to create feedback loops between public engagement and technical improvement. For example, in New York, 311 is 'a kinder gentler 911', bringing together all government communications networks to offer a single enquiry line for citizens, whatever their query. Perhaps most importantly, this way, governments learn. Every query is logged at street level, helping to produce fantastically detailed maps of every public issue, from homelessness to potholes.

As this information becomes public, its benefits will multiply. Imagine a voluntary community group aiming to tackle homelessness able to call up information of that quality and to map their own impact over the weeks and months. Would they interact with government? They would log their information on government databases as if it were their own, and they would actively encourage others to engage with the service. This, in turn, would increase its value. This is how broadband can help public engagement and technical improvement to grow together. This is the kind of feedback loop that policy makers must strive to forge.

While the technical virtues of broadband are immediately apparent, its social benefit depends upon deep and wide-ranging public engagement. This dependence upon public engagement is hardly novel – which of Britain's problems could not be solved with the dedicated energy and imagination of sixty million people? What sets broadband apart is its potential simultaneously to help structure our society in ways that enable and encourage just this participation.

In so doing, broadband may well help to shift power from the domain of the institution to that of the individual. In this environment, the influence of public services is no longer set in stone - it depends crucially on their connectedness and credibility, which they must constantly strive to reproduce.

Broadband is helping to raise the importance of four principles that will increasingly structure the environment in which takes place: flexibility, personal support and engagement, community and citizen leadership will all serve as vital benchmarks for Broadband Britain's public services. Schools must be able to respond to the diversity and imagination of their students' interests, and create learning environments that help this creativity to be expressed and developed. Hospitals will increasingly seek to create networks among their patients, helping them to share advice and support with one another. Local councils will need to engage in increasingly open-ended and future-focussed dialogue with their citizens. All of these processes will be engendered in part and facilitated in part by the ubiquity of broadband – effects that are a far cry from today's rhetoric of speed and access.

To meet these new challenges, government may increasingly strive to test itself against the principles of flexibility, personal support, community and citizen leadership. In all these areas, broadband's first contribution has been to raise expectations. From self-diagnosis to their own democratic voice, broadband users will expect to exploit its capacity to the full. As this capacity shifts beyond the merely technical to the social, it will place strong pressures on all kinds of familial, social and political institutions, while helping individuals to shape their own interface with society. This is a development that must not be ignored.
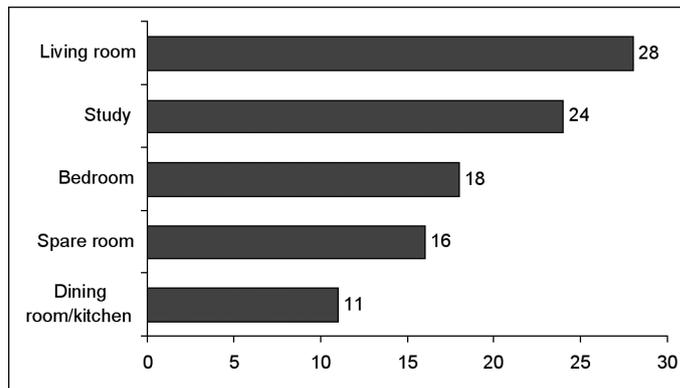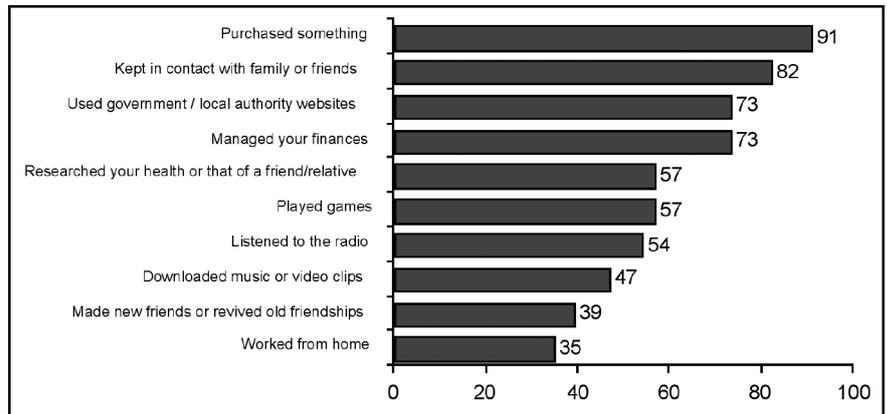
appendix:
summary of quantitative data findings

Using broadband…
- 59% of people have logged on before breakfast
- 21% have got up in the middle of the night to use the internet
- 68% of people have a TV or radio (or both) in the same room as the internet

From where in the home do you most often access the Internet? (%)

Room	Value
Living room	28
Study	24
Bedroom	18
Spare room	16
Dining room/kitchen	11

What have you done online in the past 12 months? (%)

Activity	Value
Purchased something	91
Kept in contact with family or friends	82
Used government / local authority websites	73
Managed your finances	73
Researched your health or that of a friend/relative	57
Played games	57
Listened to the radio	54
Downloaded music or video clips	47
Made new friends or revived old friendships	39
Worked from home	35

- 94% feel safe or very safe using internet banking
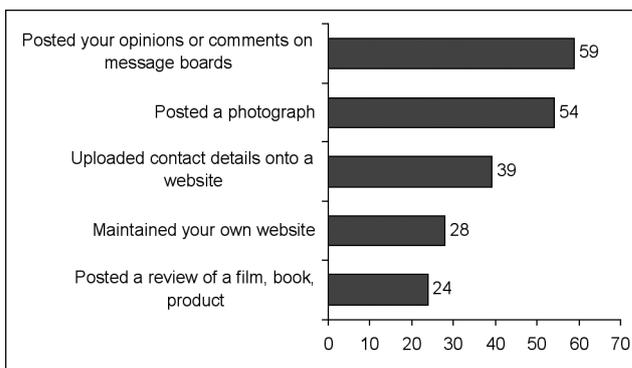- 62% do not feel safe letting children use the internet unsupervised
- 95% feel safe or very safe buying products or services online

Posting content online…
- 18% post content onto the internet daily
- 22% post content onto the internet weekly
- 16% post content onto the internet monthly
- 57% have created content to post online that they would not otherwise have created offline

What have you ever posted (or uploaded) onto the internet? (%)

	%
Posted your opinions or comments on message boards	59
Posted a photograph	54
Uploaded contact details onto a website	39
Maintained your own website	28
Posted a review of a film, book, product	24

Activities and community online…
- 29% have helped with a child's education
- 42% of 30-50 year olds have helped with a child's education
- 57% have researched their own health or that of a friend or relative
- 26% used the internet to organise 'get-togethers' or events in their local community. While most of these are informal and social, a significant number are political, community or sporting events
- 35% say that the internet makes it easier for them or their family to be involved in local activities
- 81% email people they wouldn't otherwise keep in touch with by letter or phone

What do you think you will be using broadband for in 12 months/5 years time? (%)

	12 months	5 years
Storing and sharing photos	63	67
Downloading and/or storing music	52	61
Listening to the radio	50	58
Communicating with family and friends via video	49	75
Voting	45	70
Working (out of the office)	42	53
Watching films	26	58
Watching TV	24	56
Organising community/social activity	22	33