"Big data must be opened up to the wisdom of the crowd…"

THE CIVIC LONG TAIL

Charles Leadbeater

DEM☉S

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Acknowledgements

The civic long tail

No government can afford to become isolated from the society it serves, otherwise it risks becoming distant and clumsy, trapped by its own, self-referential routines. Any government unable to respond to what citizens expect in the way they want is at risk of breeding disaffection. What citizens expect from government is shaped by the culture they inhabit, the aspirations and expectations people have, their sense of what they are entitled to. Social media and the web are remaking those expectations: how we expect to get information, make our voice heard, connect to others and receive services. Even if social media does not become a platform for overtly political activity, it is already changing how citizens expect to be treated and so what they expect of government. As people are being inducted into a more open, participative and expressive culture in their everyday lives, they are bound to carry those expectations into their interactions with government.

The most dramatic recent examples of this were the revolutions in Tunisia and Egypt and the unfolding Arab Spring. The people involved in these movements saw themselves as citizens with a voice and a sense of their dignity. They saw themselves as able to challenge entrenched authoritarian regimes to claim basic rights they knew that others had. Social media may not have been the decisive force in these movements, but it provided a kind of social glue to knit people together.

Social media and the web are creating myriad spaces in which people can voice their views, connect to others, learn to see the world from new vantage points and gather information on their own terms. Decades after the United Nations adopted the Universal Declaration of Human Rights, the web is creating a parallel but arguably more effective universal set of expectations among citizens.

The spread of wifi, broadband and smart phones is creating a universal expectation that people should be able to connect to 'the network' wherever they are. In the developing world the acquisition of a mobile phone has become a vital rite of passage: once you have a mobile you are someone, you count.

Facebook and social media are creating the expectation that you will be able to link to people, to find allies. Wikileaks, and the wider movement towards transparency and open knowledge, is creating the universal expectation that no secret can be kept for long. Google has created the expectation that if a piece of information exists it should be discoverable. YouTube and mobile phones with cameras are creating the expectation that if something has happened we should be able to see it. Twitter has created the expectation that if something is happening we should be able to hear about it first-hand, from people close to the real events. Blogging, feedback forms and collaborative rating have created an expectation that we should be able to give our assessment of virtually any experience.

Social media is creating the conditions for the emergence of a civic long tail, a mass of loosely connected, small-scale conversations, campaigns and interest groups, which might occasionally coalesce to create a mass movement. From now on, governments everywhere will have to contend and work with this civic long tail.

Yet the civic long tail is just one direction the web and social media is taking us in. As more interactions between citizens and government move online, this should yield rich new flows of information about citizens' views and preferences. The data trails left by our use of the social web are creating unfathomably large sets of data that could provide new sources of economic and social innovation, together with new anxieties about privacy and ownership of information. The increasing volume and detail of information captured by enterprises, the rise of multimedia, social media, the spread of the internet to mobile devices, and the potential embedding of networked sensors in everything from ovens to pacemakers will fuel an exponential growth in data. The emergence of these 'big data' sources, drawing on a mass of miniscule transactions, comments

and connections, creates a potentially rich mine of information for governments keen to connect, and perhaps to seek to control, what citizens do. Seen from a different vantage point the civic long tail is creating big data.

This could become a vital source of insight and information for government to predict analysis of everything from movements in house prices to the stock market to flu epidemics. Researchers at Illinois University's Bloomington School of Informatics and Computing, for example, used measurements of the collective public mood derived from millions of tweets to predict the rise and fall of the Dow Jones Industrial Average up to a week in advance – with an accuracy approaching 90 per cent. Researchers found the correlation between the value of the Dow Jones Industrial Average and public sentiment after analysing more than 9.8 million tweets from 2.7 million users during 10 months in 2008.

People's use of social media also offers the ability to track people's interest in things in real time. While gauging people's demand for products in real time may be a marketeer's dream, it is also the source of new anxieties about the impact of the social web on civic life, privacy and data security. Eli Pariser's concept of the **'filter bubble'** encapsulates the fear that the data generated by users leads to a form of personalisation, a 'unique universe of information for each of us', which means we are less likely to encounter information that challenges our existing views or sparks serendipitous connections.

So far from being threatened by the rise of social media, governments may yet find that through the masses of data it generates, social media offers a way to understand the shifting sentiments, interests and demands of citizens. If government can analyse and understand these data cleverly and quickly it should be in a better position to respond to emerging needs and even to forestall them. Government could become more intelligent, use its resources more efficiently, and create personalised services and localised solutions more easily.

Sounds promising. Yet creating that kind of capacity, especially in entrenched and often inward looking bureaucracies, will be far from easy. It will require new skills, outlooks, ways to

commission innovation and relationships with outsiders – private companies, civic web entrepreneurs – who can bridge the gap between the fleeting world of social media and the bureaucratic world of government.

The future of government will be shaped by the interaction between these two trends: the way that social media is creating the conditions for a more active citizenry, the civic long tail, and the way the governments can mine and analyse the data on these trends to become more efficient, effective and perhaps, more connected.

The hopeful web

To their credit, political leaders in the developed world have not been slow to spot the potential of social media and the web to revive political systems, which seem detached and exhausted, and service delivery systems, which seem cumbersome and clumsy.

Barack Obama was elected president partly thanks to an extraordinary web-based mobilisation of support. He translated that into an office with a basic framework for **transparency and open government** and launched a string of initiatives, which excited huge optimism. These include **Data.gov**, which opens up government data, to the use of open brainstorming techniques in the White House and the appointment of key figures from the open data movement to senior positions in the administration, such as **Vivek Kundra**, government chief information officer, and **Beth Noveck** as an adviser on open data. (Noveck is soon joining the UK Government for a stint.) The UK Government has not been far behind. It has set up the **Public Data Corporation** to make government data public and available in reliable and easy-to-use ways, a **Public Sector Transparency Board**, which includes web luminaries such as Tim Berners-Lee and aims to publish details of all public sector spending above £25,000, and **Martha Lane Fox's review** of online government services and the launch of flagship projects such as **national crime mapping** designed to help local communities hold the police to account.

Across the world others have been ploughing similar furrows from **Australia** to **Austria**, and **Italy**'s government is endorsing the open, participative, collaborative potential of the web to make public services and administration more effective and accountable. In parallel, and perhaps just as importantly, government is being pushed by civic innovators such as Tom Steinberg, founder of **My Society**, Dominic Campbell at **FutureGov**, which is promoting open, web based approaches to local government, and Paul Hodgkin, the founder of **Patient Opinion**, which provides feedback on NHS services. The USA has an even larger and more active community of civic web developers who have developed declarations on open data, applications like **Govtrac** to track government spending, and **Comment on This**, which allows people to comment on legislative proposals.

What these people share is a hopeful story about how the web and social media can bring about both social and political change, because they allow government and citizens to work with one another in new ways:

· Relationships between government and its citizens (as voters, service users and taxpayers) should become more open, transparent and so more accountable. Government should be able to share much more information with citizens, who should be able to see in much finer detail what decisions government is taking and why. Citizens should in turn be able to contribute their views, ideas and feedback. Not only should this add vital intelligence but it should also make people feel more engaged and government more legitimate.
· As more information flows between government and citizen so it should allow government a richer insight into the needs and interests of the people it serves. Government should become more effective by allocating its resources more intelligently to meet citizens' needs. A good example is the way the **London Fire Brigade** has used data on fire risks to prioritise its fire prevention work.
· Relationships within government among public servants should become more collaborative. It should become much easier for

professionals in different public services – health and social services – to share information about a patient, for example. The silos, which make it so hard for service users to get the integrated solutions they want, should be broken down. As **Surrey police** has shown, more timely and focused data can help focus collaboration on particular crime hotspots or incidents more effectively.

· Citizens should be better able to self-organise, based on a clearer understanding of their needs and the resources available to meet those needs. The lateral social connections the web makes possible should make these mutual self-help solutions easier to create.

If government was good at using the tools and the data, which the social web is making available, then it could become more accountable, collaborative, innovative and effective all at the same time. Just as importantly, communities and citizens should become more capable, adaptive and resilient. Better government and stronger communities could grow together. Government 2.0 should grow in tandem with Community 2.0: more civic activism combined with more intelligent government drawing on big data. **Mark Drapeau**, Microsoft's Government 2.0 evangelist, says it is about 'innovation by government, transparency of its processes, collaboration among its members and participation of citizens'.

Yet the promise of 'big data' – large and growing data sets about what citizens do and want – will only be realised with more open data to allow more people to analyse and find value in it. Left to its own devices government is unlikely to spot all the potential value in the data available. Opening it up to others to sift through should engage more eyes and ideas to spot potential value. Open government data are data sets released by government in the public interest, in which all data are anonymous. Citizens have the right to repurpose, reuse and share the data without asking anyone's permission.

Daniel Kaplan, the director of **FING**, the French next generation internet foundation, paints **this picture** of a future in which citizens can contribute to and mine open, big data sets:

Citizen groups expose corruption and abuse, and engage in informed public discussion leading to better decisions. They even contribute to enlarging the pool of public data, as can be seen on OpenStreetMaps. Large and small firms create all kinds of new and improved services, thus contributing to growth and quality of life. Scientists and data-journalists process masses of data in order to provide new insights on, say, climate change or urban dynamics. Public agencies co-operate with one another to eliminate redundancies, and with the public and citizen sector to provide better public services. Democracy finds a new youth through constant feedback, evaluation and debate.

Yet for all the optimism that Government 2.0 has excited, it is still difficult to escape the sense that government's feet are trapped in clay, knee deep in water, as an incoming tide of cultural change swirls around it.

Marooned by an incoming tide

Government is not alone in this predicament. Almost all media and information businesses, from newspapers to music publishers, are searching for new business models. Government is no exception.

Indeed the capacity to aggregate and interrogate the floods of data being generated is itself mooted as one key to competitive advantage in the modern economy. A **recent report** from the management consultants McKinsey argues that 'analysing large data sets – so-called big data – will become a key basis of competition, underpinning new waves of productivity growth, innovation, and consumer surplus'. Yet it is far from clear that the capacity exists within companies or government to make use of the flood of data being generated by people's ubiquitous online interactions and the integration of feedback devices in everything from their cars, credit card transactions and smartphones, McKinsey predicts:

There will be a shortage of talent necessary for organisations to take advantage of big data. By 2018, the United States alone could face a shortage of 140,000 to 190,000 people with deep analytical skills as well as

1.5 million managers and analysts with the know-how to use the analysis of big data to make effective decisions.

The public sector faces particular challenges in keeping pace. While millions of people take to YouTube, Facebook and Twitter, only a minority of people interact with governments in Europe through the web. In contrast to the speed of response people get from online and digital retail services, such as ASOS and Amazon Prime, public services often still seem slow and cumbersome. Through social media sites like Twitter and LinkedIn, people are used to connecting with people easily. In contrast public services can often seem inflexible, departmentalised, obdurate and unyielding. They rely on control and planning, whereas in the emergent world of Web 2.0 things get done through constant communication and mutual adaptation. Web 2.0 services thrive on rapid feedback. Government services have convoluted feedback loops that connect service providers to their consumers only indirectly, with the information often being filtered by regulators, inspectors, commissioners and politicians.

So even when government has responded to the potential of social media, often in well-intentioned ways, it has often reincorporated disruptive technologies into its established ways of doing business, neutering much of their potential. A poignant example is the way **MyPolice**, to hold the police to account, found that its web address had been taken by MyPolice.gov, an official version of the same service. The success of Patient Opinion partly prompted the creation of **NHS Choices**, which was commissioned from the public service outsourcer, Capita. In the UK someone can apply for a student loan online but at the end they still have to print off a 30-page document, sign it and send it in the post. Procurement processes militate against open-ended, rapid, cumulative, customer-focused innovation because they favour heavy-duty systems in which everything is specified in advance and leaves little room for adaptation. Regulation and legal issues often divert energy away from disruptive innovation and into compliance. What comes out of this public sector culture is exactly what one would expect: a

plethora of websites, which are often over-engineered, difficult to use and slow to adapt.

Our political systems are based on clear units of jurisdiction – local, regional, national and supra-national – which are governed by orderly political processes – elections, debates, legislative proposals, parliamentary and judicial review – which resolve conflicts of interest. The unruly web does not follow those rules. As **Andrea di Maio**, a Gartner analyst, puts it:

People on social media are aggregating and re-arranging in new and unpredictable ways, cutting across organisational and geographical boundaries, forming and dissolving bonds, coalescing around a cause to then scatter separately in different directions. Our government systems are based on pulling together people who share a territory, who have something in common – be it language, religion, land, history, ideals or a combination of all these. Rules of residence, immigration, citizenship apply to processes that take from days to years to be completed. But in social media I can join a platform, a group, a cause today and leave tomorrow.

The lack of momentum, however, is not all due to government obduracy. The case for open government data is often made in ways that seem designed to send people to sleep. Open government data nerds are excited by reliable, clean, complete, timely and accessible data. Everyone else is interested in better schools, safer neighbourhoods, cleaner streets, trustworthy hospitals. Deluging people with more data will not, on its own, make government more accountable or responsive.

Given this track record it seems unlikely that government will be well placed to take advantage of 'big data' to make its services more attuned to citizens' needs. It lacks the skills necessary on the scale required. Opening up the data to allow private companies, civic entrepreneurs and campaigners to draw on it will help. But openness per se is not the answer. The key will be in crafting the right relationship between government as the holder and collector of data and the civic long tail of people who want to put it to public use, creatively and effectively. The promise of 'big data' to make government more intelligent will only be realised if government learns how to open up data so

citizens, entrepreneurs and campaigners can start using it for themselves. 'Big data' and the civic long tail need to work together.

Start from the citizen

These two approaches may be complementary but they could be at odds. Better systems to mine and analyse data, to make automated decisions about allocating resources, could, at the extreme, license 'government by algorithm'. Government departments, service delivery chains and entire cities could be run by pervasive, invisible systems of which we have little knowledge. That is not at all the same as revitalising democracy by using the web to make it more collaborative and conversational. The challenge is to find a way to combine these two very different visions of the civic future: more effective and intelligent public systems, based in part on the analysis of 'big data' combined with more adaptive and capable communities, able to use the data to solve problems they face. How might that be possible?

The key in the long run is that government needs to make stronger, more creative connections with communities of locality and interest to sustain and improve how it does its job. Government 2.0 is about improving people's relationships with government, either as citizens through the political process, as funders through taxation or as service users. Community 2.0 is about enlarging and empowering citizens' relationships within one another. The first is about delivering better services to people, mainly by solving problems in government supply chains and decision-making leading to a leaner, cleaner, swifter and more intelligent government. The second is about communities looking after themselves more effectively and the web providing a platform for unfolding communitarian creativity.

As **Stephen Goldsmith** argues in his book *The Power of Social Innovation*:

A leap forward in the quality of life for communities will more frequently occur when government opens the door for catalytic social progress

*spearheaded by the many…who make changes daily in their communities.
Together these acts can play a part in turning clients of the state into active,
participating citizens.*

Martin Stewart-Weeks, a senior director of Cisco's Internet
Business Solutions group, argues governments need to start
'behaving like the environments they confront – complex,
adaptive and organic'. This kind of approach relies on
mobilising a civic version of the long tail popularised by **Chris
Anderson**.

As an example of how it could work, take the very real issue
of fire services. The key to the sustained fall in deaths in UK
domestic fires is not primarily the provision of better fire
engines. The key has been the installation of smoke alarms in
millions of homes. The most effective fire services are campaign-
ing organisations, persuading people to make use of a low-cost,
easy-to-use technology at home. Better fire engines are a way to
respond to fires once they have started: the equivalent of
Anderson's big hits. They are rare events, which consume a lot of
resources. Smoke alarms stop fires happening in the first place
but through thousands of smaller investments, which cumula-
tively add up to something much bigger. Too often the public
sector has fire-engine type solutions: heavy duty, centralised,
inflexible and high cost. Smoke-alarm-style solutions are less
visible but are often more effective as they offer low cost and
distributed mass self-help. There is no doubt that we need smoke
alarms as well as fire engines. The two together are far more
effective than either on their own. We need public services
designed to mobilise the long tail of civic activism and those
which are distributed and offer easy-to-use, low cost technologies
enable access to that civic long tail.

Connecting with the most productive part of that long tail,
however, takes insight and information, which is where 'big data'
comes in. Take the challenge facing the **London Fire Brigade**
(LFB), the third largest fire service in the world, with 5,700
firefighters and 1,300 support staff, serving a population of more
than 7.5 million, in 3.2 million households, across an area of 1,537
square kilometres. The service carries out 65,000 home visits a

year to install smoke alarms and advise on fire safety. At that rate it would take 50 years to cover every household. So it is vital the fire prevention work is targeted on those households at highest risk. As most risk models are based on past fires, the fire service needs to predict where new fires are most likely to occur. To do that means getting timely, rich and detailed information about the mix of household and lifestyle risks associated with domestic fires. The model the LFB uses feeds 60 different sources of data, from Mosaic lifestyle data, census data and population demographics, broken down into 649 wards. This gives the service a better chance to target its limited fire prevention resources on the part of the civic long tail where its efforts will generate the biggest pay-off. More intelligent and informed public services, combined with community self-help, should generate better overall outcomes: 'big data' and the civic long tail of mutual self-help working effectively together.

The connection between government services and community action becomes even more interesting when communities start to map their own needs and the capabilities available to address them. This kind of communitarian creativity enables the possibility of transformative innovation: communities finding entirely new ways to meet needs, which lie outside the traditional public sector. Another example of how to make this connection is the growing use of **community-generated maps** to plot the community's resources and capabilities from park benches to bike racks and child care facilities. Once a community can map its own resources in a more sophisticated way, it then needs ways for people to access and share these resources. **Car and bike-sharing schemes** are two examples of the principle at work. Another comes from the field of ageing, which is a major social challenge for most developed countries.

Surveys show that living well in older age depends on whether people stay socially connected, have strong relationships and remain active contributors to society. Our response to ageing should not be to focus on what public services can do for people in need but on how we can create platforms, markets, forums and networks where people can get together to be active and make and sustain relationships. An example of this in action is

the **Southwark Circle** model for building mutual self-help among older people to help them get simple jobs done by turning to one another. Much the same logic could be applied to other issues: government provides platforms, support, tools, for people to devise mutual self-help solutions, which complement and build around basic public services.

There is a political equivalent to this combination of Community 2.0 and Government 2.0 – more collaborative and conversational forms of governance.

Collaboration should be the watchword for a new culture of politics that perpetually engages citizens in rolling debate and dialogue rather than episodic exercises in democratic accountability. The **Otakantaa** citizen's forum, in Finland, and **Altinn2**, in Norway, might provide working models for this kind of open, collaborative platform. Governments are slowly learning, especially at a local level, how to create a more continual, low-level conversation with their citizens. A good example is the way **Haringey** Council in north London has fostered the development of a mass of local, online community groups.

Collaborative democracy, as **Beth Noveck** presents it, is about government finding sets of citizens, with relevant expertise and with whom it can collaborate to solve problems. It is not a model for mass participation or democratic deliberation but for government to work with micro-elites and specific communities to solve problems more creatively.

One application for this could be in planning and development. The British planning system is highly adversarial: a developer proposes; a planning authority, usually a council considers; and local residents protest. The web is slowly changing the traditional planning system by allowing drawings and plans to be viewed online and responses to be submitted electronically. A more radical step would be to create a version of Noveck's collaborative approach in which planners convene and lead a more creative process of collaboration between developers, residents and experts. Digital tools are making it possible for far-flung, multi-disciplinary teams to collaborate on complex engineering and architectural projects. The same tools

and techniques could be made available for local planning discussions. Applicants could be asked to go through a collaborative planning exercise with local communities before lodging a formal application. The web will not remove conflicts of interest. The planning process may remain largely adversarial. However, it may benefit from having a more open, collaborative and creative front-end.

This would be a move towards what **Charles Armstrong** dubs **emergent democracy**. Armstrong argues democracy evolved as a means to scale local traditions of self-government to the much larger societies, cities and nations created by industrialisation and urbanisation. That meant self-government had to become more formal and structured, following clear rules and procedures but at the cost of becoming more rigid and less agile. The danger is that the democratic system becomes bogged down in its own procedures, distant from the society it serves, slow to learn and adapt. The web, Armstrong argues, creates the possibility of democratic systems that can operate at scale and yet be fluid, adaptive and engaging when needed. He evokes the bustle and jostle of a village hall meeting but conducted at the scale of a nation.

One does not have to buy into that to see that the spread of the web and demands for greater openness and transparency are creating new rules for governments to engage with citizens. Prof. Dr Jörn von Lucke and Christian P. Geiger, from the **Deutsche Telekom Institute for Connected Cities at Zeppelin University Friedrichshafen**, capture the shift this way: in the past, government treated all information as secret unless a decision had been made to make it public; in future, data should be assumed to be public unless there are strong reasons for keeping it secret. In the past, rights to reuse data were constrained; in the future, public data should be free to be reused at zero cost to the citizen. In the past, government tended to publish data only in connection with one of its publications, such as a white paper; in future, public data should be routinely available for citizens to use regardless of whether government has any particular plans to publish it.

The promise of 'big data' to make government more intelligent and responsive will only be realised if government

also learns how to open up this data to the civic long tail – an army of civic entrepreneurs who seek to make the data useful for citizens and communities trying to solve knotty problems.

What now?

For much of the last century there seemed to be little divergence between the kind of public services the state provided, the kind of services the population needed, the means at the state's disposal to deliver and the political processes that governed the system. All four seemed to fit together. But now across a whole range of public services a yawning gap is opening up between what public services deliver, what citizens need and the forms of organisation providing them. Gaps of this kind are bound to emerge in a dynamic economy. They create opportunities for innovation. It is also almost inevitable that powerful incumbents heavily invested in established ways of doing things fail to recognise new needs and the potential of disruptive new technologies. Sometimes these incumbents can resist change for years. However, when technologies, consumer expectations and organisational possibilities all shift at the same time – as they are now – it often becomes difficult for established companies to continue to control their industries. New entrants emerge to pioneer new business models, which meet emerging consumer needs in more effective ways. Often these new approaches come from upstarts and outsiders carrying little baggage. When change comes, older established companies have to go through a painful, lengthy process of restructuring and rethinking. Through this process of innovation and entrepreneurship industries explore and find new ways to meet needs. The public sector has been so slow to absorb and adapt to the web because that kind of process is almost entirely absent from our civic culture.

It is not merely a question of sharper skills and cleverer commissioning processes, although both are needed. Hoping citizen innovators will make use of vast treasure troves of open government data will not do the trick. Commissioning large companies to install IT systems that were specified years in advance will not deliver the kind of agile, consumer-friendly

applications needed. In short, we lack an effective innovation strategy for the public sector to make the most of open 'big data' and social media. An effective innovation strategy would have five main design principles:

- *Simplicity*: Public sector processes are too complex. We need ways to cut through the regulation that ensnares new services.
- *Risk*: The public sector is too risk averse. We need to create space in which risk-taking, putting things out in beta, becomes possible.
- *Speed*: Public service innovation is too slow. We need to build in more urgency, partly by utilising crisis.
- *Low cost*: Public sector web development tends to be too costly. We should reuse tools that most people already use, like Facebook and YouTube.
- *Openness*: Public sector innovation strategies tend to be closed and producer driven. We need approaches that are more open and consumer-driven.

What that would mean in practice is that we would:

- *Focus on issues that count*: People are not interested in open data or the web. They are interested in whether their neighbourhood is safe, their school is good, and their grandparents are well cared for.
- *Issue challenges*: Big and complex problems require innovative collaboration such as **treatments for Alzheimer's** and micro-challenges that matter to local communities, such as traffic calming, pedestrian safety and children's playgrounds.
- *Capitalise on crisis*: They generate the conditions for innovation. Californian wildfires, Iceland's volcanic eruptions, hurricane Katrina and Kenyan election violence all produced new civic web services.
- *Draw on sub-cultures*: Radical new ideas often come from the margins, such as mavericks like Paul Hodgkin, the founder of Patient Opinion, rather than the mainstream.
- *Embrace open innovation*: Both to draw ideas from citizens and application developers but also to make prototypes available so

that people can add to them. **The Simpl** platform is a good
example of what is needed.

· *Create new spaces for innovation*: Where people with needs and
people with potential solutions can meet. The US **The City
Camp** and the UK **Social Innovation Camp** are promising
models, which bring together web developers and civic
entrepreneurs.

· *Invest to scale*: Too many public service innovations get trapped in
the location where they start. Generating a new idea is difficult
but easier than working out how to take it to scale. Simple,
compelling, adaptable services do scale.

· *Plan to decommission*: Generally, government innovation is
additive with innovations adding to an existing range of services.
Instead we need to learn how to disinvest from older, less
effective services while investing in new, low-cost distributed,
self-help solutions. Innovation and decommissioning need to go
together.

The future is behind us

The social web is appealing because it seems to offer a different
way to be modern. One story of the web and modernisation is
the relentless march of technology to make government systems
smarter, quicker, better, and armed with data-mining, algorithms
and cloud computing. The other narrative is that the social web
allows us to recuperate old ideas of smaller scale organisations,
which rely on networks and relationships – a more mutual and
associative form of self-governance. Often these ideas of
decentralised, associational politics have seemed to be the
antithesis of modern, technocratic, expert systems. Systems that
operate at scale have found it all but impossible to sustain
intimate relationships with people. As they become systems so
they become distant, impersonal and – at worst – unyielding and
alienating. The social web seems to offer a way to combine these
two stories, perhaps for the first time. Smarter government could
be combined with stronger communities: more intelligent,
integrated, skilled public services, combined with the long tail of
civic activism; systems that scale but which are also intelligent

enough to attend to the local, the human and the personal. These will be the systems of the future, capable of operating at scale but with a sophistication that allows them to be intimate and to adapt to circumstances.

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The social web has completely transformed civil society. With greater ease than ever before, people can voice their views, connect to others, learn to see the world from new vantage points and gather information on their own terms. The result is a civic long tail: a mass of loosely connected, small-scale conversations, campaigns and interest groups, which occasionally coalesce to create a mass movement.

The advent of social media has led to people expecting the same degree of reflexivity in other walks of life, including in their interactions with the State. As more conversations between citizens and government move online, masses of data on citizens' views and preferences will be created. *The Civic Long Tail* argues that the potential for 'big data' to make government more intelligent and responsive will only be realised if government also learns how to open up this data to the civic entrepreneurs who seek to make the data useful for citizens and communities.

Charles Leadbeater is an associate of Demos.