



Alliance
for Useful
Evidence

SOCIAL MEDIA AND PUBLIC POLICY

WHAT IS THE EVIDENCE?

Can evidence drawn from social media enhance public services and inform the development of public policy?

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This is a paper for discussion.

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Can evidence drawn from social media enhance public services and inform the development of public policy?

INTRODUCTION AND CONTEXT

The digital revolution – a fundamental shift in the information environment for government

Government and public service delivery is taking place in a changed world. A significant level of social, economic and political activity is now happening on the internet.

As people buy and sell goods, search for information, browse the web and share their day-to-day experiences with colleagues, friends and family through social networks, they produce an enormous amount of data.

The use of this data to develop insights is growing rapidly. In the private sector it is being used to enhance decision making, understand customer behaviour, improve operational efficiency and identify new markets.

The new information environment¹ also obliges government to develop new capabilities to understand the information available and to compete for attention and influence within it.

Part of the challenge in embracing the digital age is that, in the midst of rapid change, it's very difficult to know where to place your bets. We do not yet know exactly what access to large volumes of social data will mean for our society. It certainly will not present a panacea for long-standing social problems; but it can add another dimension to our understanding of them.

This report considers whether social media data can improve the quality and timeliness of the evidence base that informs public policy. Can the myriad of human connections and interactions on the web provide insight to enable government to develop better policy, understand its subsequent impact and inform the many different organisations that deliver public services?

The report is based on an evaluation of available literature and interviews with 25 experts from a number of disciplines. Given that developments in this field are at such an early stage, it aims to provide helpful signposts rather than definitive answers.

“Social media science promises to be transformative. By harnessing datasets unprecedentedly large, linked and recent, it could make public policy decisions much more informed and data-led. However, we are far from there yet. The current methods, skills, tools – many drawn from the advertising and marketing industries – fall far short of the evidentiary standards needed by policymakers making weighty, important decisions.”
Carl Miller, research director, Centre for the Analysis of Social Media at Demos

EXECUTIVE SUMMARY

Can evidence drawn from social media enhance public services and inform the development of public policy?

“Free sharing, recommendation and rating of content by individuals, with that incredibly low barrier to entry, will remain a mainstay of our culture. And it will be an essential part of a government’s function to engage with and understand that flow of personal information.”

– Dan O’Connor, director of research, RMM London

Key findings:

- Social media presents a growing body of evidence that can inform social and economic policy. It has value for government, the policy community and public service delivery organisations.
- It offers a nascent but rapidly growing opportunity to overhaul and significantly enhance the process by which government understands society and the impact of its policies.
- The methodology, tools and processes required to generate evidence from social media that is robust enough for policymaking are not currently available, but are realisable in the near-term.
- Evidence drawn from social media becomes useful and far more powerful when matched with other data sources. Other data sources also enable the corroboration and verification of social media data.
- Many of the techniques required to develop new socio-economic metrics drawing on social data are being pioneered by international development agencies, with citizen-led initiatives playing a pivotal role.

“In 10-15 years’ time it’s entirely possible that every government department will have a social media analysis unit.”

Jamie Bartlett, director, Centre for the Analysis of Social Media at Demos

- There are opportunities for policymakers and public service delivery organisations to:
 - Develop a broader range of social indicators that provide more granular and timely insight than traditional research methods.
 - Develop a more advanced understanding of economic well-being through indicators that provide more specific and local insight, rather than broad measures such as GDP.

- Enable more responsive public service delivery that is sensitive to the needs of users, particularly at a local level.
- Produce early warning indicators of public service delivery failure, particularly in the fields of health,² social care, law enforcement and transport.³ Social media can provide a critical voice outside the silo or organisation when traditional warning systems have failed.
- Realise cost savings by reducing the need for traditional research.
- Reduce the democratic deficit by narrowing the gap between citizen and state.
- Develop highly effective public information campaigns based on accurate and localised understanding of views and behaviours.
- Develop powerful and hitherto difficult to realise insights about individual behaviour, particularly our understanding of mental and physical health problems.

“We estimate that global spending on the technology tools and supporting services that enable organisations to search and analyse data is growing at 16 per cent per annum. We expect it to reach \$143.3 billion by 2016. It’s important to note that around a third of that figure will be investment in information management. That is, the processes involved in the sourcing, storage and management of data and ensuring it is robust enough for analysis.”

Tom Pringle, principal analyst, Pringle and Company

“There is a debate to be had about how far behind technological change government should be. Clearly government shouldn’t be right at the cutting edge, because it can be really expensive. But there also are a further set of issues that many companies don’t have to contend with: public concerns about privacy and big brother type surveillance.”

Chris Yiu, head of digital government, Policy Exchange

What is happening now?

- Social media is already informing public policy and service delivery. Insight is being drawn from engagement, broad sentiment analysis and more granular analysis of conversations about specific issues. But these activities are limited in scope and fragmented across the public sector – it is most advanced and visible within law enforcement and intelligence agencies. Internationally, the use of sophisticated analysis of social media within the public sector for decision making is to be found in international development agencies.
- Social media is enhancing the transfer of evidence from the research community to policymakers. Systems are being developed that will further enhance this process and encourage greater dissemination of academic research and data using digital tools.
- Efforts are underway in the higher education sector and elsewhere to develop the capabilities required to generate insight from social media and other social data sources that is robust enough for public policy decisions.

- Major technology firms and providers of the most widely used social networks such as Google, Facebook and Twitter have become actors in the public policy arena, unwittingly or otherwise. They are setting the boundaries for participation. Understanding and aligning with their business models will become increasingly important to the public sector.

“At think tank level and party level the use of social media research to help determine policy, not simply to enhance its delivery, may already be visible. This remains less clear within government. That said, manifestos were written for the current parliament in early 2010 when current social media research techniques weren't as common. The story will almost certainly be different in 2015.”

Gareth Ham, head of political analysis, Brandwatch

Risks presented by a changing information environment

“Government has a different set of risks to contend with when it comes to social media. It only has one chance to mess it up. If your relationship with your bank or supermarket goes wrong, you can go to another one. But if the government loses your trust then it's blown it. It will not get that trust back for a very long time. Risk-aversion? Yes sure. But with good reason. Government is often the provider of last resort.”

Paul Clarke, formerly of the digital engagement team, Government Digital Service

However, exploiting these opportunities to develop and adopt insights from social media is not without its risks.

As the information environment evolves risks are already emerging that require attention:

- Any further exploitation of social media data – however benevolent the cause – requires a more up-front approach from government. To avoid a privacy backlash a carefully managed communication programme to inform and reassure the public is necessary.
- How one arm of the state uses social media and public data will impact public willingness for other uses. Failure to prevent a privacy backlash will have a long-term detrimental impact on research that could be significantly enhanced by access to other large social datasets, such as health.
- The public policy community, particularly researchers, require clarity about the ethics of using data from social networks, especially when the research is for government.

“I would like to see the computer science disciplines spend more time thinking about the ethics of what they're doing. University ethics departments often don't concern themselves with non-human subject data such as bytes and binary – but there are humans behind the data. Their research projects should also have to go through ethics research panel.”

Jamie Bartlett, director, Centre for the Analysis of Social Media at Demos

Recommendations

In order for policymakers and public service delivery organisations to take advantage of the opportunity presented by the proliferation of social data, the following actions should be taken:

- The Cabinet Office should consider setting up a mutual organisation, possibly partly commercially funded, that works in partnership with the research community to develop the systems, technologies and capabilities required to produce rigorous insights from social media. These insights should be made available to policymakers and private, public and third sector organisations engaged in public service delivery.
- The development of insights from social media should form part of an integrated data strategy for government. It should include frameworks to enable central government departments to verify and embrace data sources provided by external organisations.
- Government should develop data-driven insight and the means of adopting those insights in controlled environments, similar to those used for war-gaming.
- Central and local government should facilitate and incentivise the private and third sectors to develop insights from social media and other data sources.
- Citizen-led initiatives that capture data useful to policymakers and public service delivery organisations should be encouraged. A strong signal from government is needed to show that rigorous social data presented to policymakers and delivery organisations will be heeded and adopted.
- The Government Social Research Service should work with higher education bodies and the wider research community to develop a legal and ethical framework for research that draws on social media data.
- Government will need to engage with the public to ensure that openly available data is used in ways that are commonly agreed to be ethical and legitimate.
- Public service delivery organisations should be encouraged to implement open data policies and share anonymised public service user data with each other to enhance public service delivery.
- Third sector and other organisations seeking to achieve social outcomes should invest in developing highly granular insights about their service users from social media matched and verified with other data.
- Political and the civil service leaders should encourage the private sector to share data as part of their corporate social responsibility (CSR) programmes with organisations which are trying to achieve social outcomes, such as government and the third sector.

“How do you create the market incentives to allow the private sector to invest? In other words how can technology platforms make money from presenting data to policymakers?”

Jonathan Grant, senior fellow, RAND Corporation.

“The big technology companies have an interest in making people aware of the social and public policy benefits of the information that they hold.”

Jamie Bartlett, director, Centre for the Analysis of Social Media at Demos

“You can only go so far and pretend that the online world doesn’t exist and isn’t part of someone’s reality. Taking a long view of this – there will be a slow cultural acceptance that volunteered information online will become part of who you are.”

Paul Clarke, formerly of the digital engagement team, Government Digital Service

“If we stop thinking of social media as solely a function of the marketing department then it’s going to become a lot more useful. Being ‘social’ as an organisation means being open and having engagement running through your processes. The best description I’ve heard is that social media turns the dial from broadcast to engage.”

Karl Wilding, director of public policy, National Council for Voluntary Organisations

Scope of this report

Social media presents an exciting prospect for policymakers and researchers – it makes it possible to seek information from individuals across a dispersed geography, anonymously, at reduced cost. It can be used as a tool for:

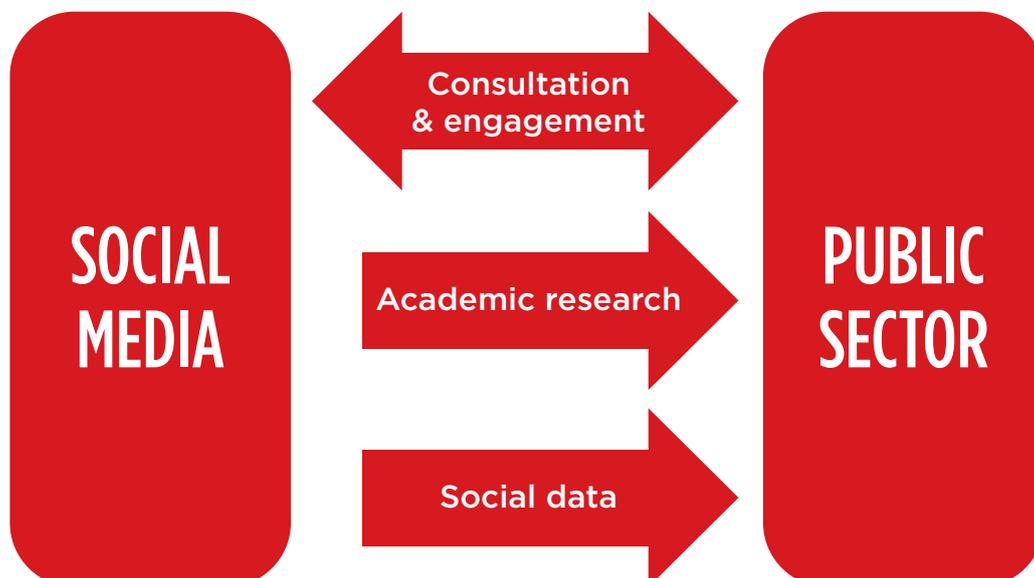
- Collaboration – developing policy by wiki
- Consultation – crowdsourcing opinions or carrying out a poll
- **Primary research – analysis of large datasets available**

This report is concerned with social media’s potential to act as a tool for primary research.

“If anyone starts talking about doing ‘some social media research’, I think it’s a mistake. You need to be much more specific than that, ask yourself what you can gain from different types of social media data. Can the question you’re asking be answered by that specific dataset?”

Kandy Woodfield, director of learning at NatCen Social Research and co-lead of the research network New social media, new social science.

Figure 1: Sources of evidence from social media



Definitions used in this report

Social media. The term social media used throughout this report refers to social media in its broadest sense, going beyond well-known networks such as Twitter and Facebook to include forums, comment sections on mainstream media sites, and so on. Specifically, it refers to any interactions where people create, share, and exchange information and ideas in virtual communities or networks.

Social network. An online platform that enables communication and interaction between people who share interests or real-life connections.

Big data. A recently coined and very broad term that describes the recent explosion in volume, velocity and variety of digital data produced around the world.

“On the whole people will relish the chance to communicate with government through social media. Obviously there will be some exceptions, but I’m sure that the majority of people want their views to impact on the formulation of policies they care about.”

Gareth Ham, head of political analysis, Brandwatch

OPPORTUNITY

Social media as an enabler of the vision of real-time socio-economic insights

“There are three reasons social media can be valuable. Firstly, the size of it, the sheer volume of data that is available. Secondly, it is immediate and potentially very responsive, allowing for simultaneous reaction and interaction. And thirdly and perhaps most importantly, the incredibly low barrier to entry – almost any voice can now enter a public conversation. This is something that has not happened before.”

Dan O'Connor, director of research, RMM London

“The role that social media can play in government social research is obviously an issue we are very interested in. It opens up opportunities for collecting data in new ways, and also presents vast new primary data sources which could potentially provide valuable new insights. However, many of the tools needed to analyse these data sources are still being developed, and there is a lot of work to be done to show that analysis of social media data can provide robust and reliable results. Government Social Research (GSR) members are already actively engaged in learning about the research opportunities presented by social media, but GSR must also ensure that government social research always meets the high standards of rigour, propriety and research ethics required by the GSR code.”

Jenny Dibden, head of the Government Social Research Service

Social media, backed up and cross-referenced by other data sources, presents a powerful opportunity for public policymakers and service providers to develop a rich source of real-time, reliable data about social, economic and political issues. This vision, although not immediately realisable in its entirety, also presents risks.

“The advantage of looking at different data sources with blinkers on is that you can be very focussed in your approach. You can divide it up into silos. But you'll miss the bigger picture and the additional insight you can get from linking disparate data sources. What makes social media powerful isn't necessarily social media in isolation it's when it's used in conjunction with other types of data.”

Harvey Lewis, analytics research director, Deloitte

Social networks provide insight through their role as a sophisticated communication platform. They also enable people to rank online content and develop effective hierarchies of the vast information flows that make up the World Wide Web.

“The internet created a vast amount of information that search engines such as Google try to organise. But that is a very unnatural way for us to find things out as people. The way we have always found out information is through our social networks, through people we know and trust. Social media has evolved for us to deal with information overload.”

James Grant, social media and digital inclusion officer, Joseph Rowntree Foundation

“I think the Government is leading on this. Look at its open data policies; it's way ahead of us on data and transparency. None of this stuff is easy, where we have to give governments a fair hearing is that these technologies are moving very, very quickly. There are cultural changes going on in terms of people's attitudes to data that I don't think we fully understand.”

Karl Wilding, director of public policy, National Council for Voluntary Organisations

The scale of the opportunity for government is considerable. Social media offers the potential for:

- Enhancing democratic representation.
- Developing early warning indicators of problems in critical public services and infrastructure such as health, law enforcement and transport.
- Providing new insights into intractable social problems.
- Channelling evidence between the research and policy communities.
- Information sharing and collaboration at all levels of government, particularly the front line.
- Knowledge sharing amongst public service users, reducing demand on the public sector.
- Improving public service delivery, particularly at a local level.
- Developing highly effective public information campaigns based on accurate and localised understanding of views and behaviours.
- A check against ideologically driven policy.

“Social media is an opportunity which allows you to start to bridge the democratic deficit. Because you can skip the intermediaries. It allows you to have information that is much more granular. And it gives you information that is real time.”

Jonathan Grant, senior fellow, RAND Corporation

“It’s certainly possible to tap public opinion and general sentiment through social media: but it is extremely difficult. In so far as reducing the democratic deficit the big danger is you’re going to make matters worse by listening to a handful of Twitter users. Whilst there is an opportunity, taking just one platform or one subject in isolation could be highly misleading.”

Jamie Bartlett, director, Centre for the Analysis of Social Media at Demos

The most powerful social insights presented by social media⁴ include those on:

- **Social order and civil society** – social media has played a very visible role in the organisation of protest movements. The reach and impact of social media in this area provides insight to understand the processes of civil society.
- **Politics and trust** – social media contains a wealth of information about people’s engagement with mainstream politics, and how the government, police and other facets of the state are viewed across populations.
- **Sentiment and attitude** – social media provide access to population level data concerning sentiments and attitudes on all aspects of social, economic and cultural life. Analysis of this data that can help us predict social, political and/or economic actions.

- **Consumption and sustainability** – social media, particularly in conjunction with other large data sets, provides a wealth of information about where, how and to what levels people consume, create waste, and participate in forms of sustainability.
- **Creativity and the arts** – social media hosts and enables a plethora of creative and artistic forms and provides new ways for people to engage with established and emerging cultural industries.
- **Health and well-being** – researchers can gain data about the health and well-being of people through social media at levels of detail and scale that were previously impossible.
- **Information diffusion** – social media is now central to the flow and spread of all kinds of information. Researchers can track these flows to understand how different types of knowledge gain currency and influence.

“A huge proportion of interaction on the World Wide Web relates to health. And patient groups were one of the first to be self-organised. The techniques to use evidence bases taken from patient groups are probably more advanced than interpreting evidence bases of experience in other sectors.”

Michael Cross, journalist

“How useful data is, is a function of how timely it is and how accurate it is. The most accurate data in the world delivered to you five minutes after you take the decision is useless. Something rough and ready three months before you take a decision will give you time to enhance the quality of the data, it will result in a better decision.”

Richard Stirling, commercial team, Open Data Institute

Real time

The immediacy of the insights that can be drawn from social media is a ‘game changer’. Much government policy is based on out-of-date information – yesterday’s questions answered tomorrow. Social media offers a chance to gather real-time insight.

Consider the time lag and consequent inadequacy of traditional research to inform policy; and contrast this with the potential value of a broad range of social indicators that are up-to-date or even real time.

“We had a census a couple of years ago and we’re only now starting to get information from it. I don’t buy it that we can’t get that information some other way now.”

Jonathan Grant, senior fellow, RAND Corporation

“Real-time analysis of big data might not provide as statistically reliable data as traditional poverty indicators but, if combined with human sense making, it can provide evidence that is ‘good enough’ for policymakers to react more promptly to crises, if not anticipate them. Simply put, waiting for months or years for the official data might no longer be an option in a world of increasing complexity.”

Giulio Quaggiotto, practice leader for knowledge and innovation at the United Nations Development Programme, Europe and CIS

Sincerity

One of the more compelling arguments for social media research is that, compared to a focus group for example, it can more accurately reveal the reality of human behaviour. ‘Observation bias’ is not present in a frank discussion about a shared health problem in an online forum. Therefore social networks, and particularly specific interest forums, could prove invaluable in tackling some of society’s most intractable problems, particularly mental and physical health problems.

Open data

Recent initiatives by the UK Government to open up public sector data⁵ sources will encourage and facilitate innovation. It will enable many different types of organisations to leverage the data held by government for the common good; and to bring together multiple social data sources and match them with insights from social media.

Efforts to encourage other organisations and sectors to share their data will create greater opportunities. Development agencies are calling on the private sector to do so as an act of philanthropy.

“Cynically, as we get closer to the next election the enthusiasm for openness that any new government comes in with is going to get trodden on.”
Michael Cross, journalist

Academic research

“One of social media’s great advantages is that it narrows the bandwidth in terms of topics and thus allows really targeted dissemination of relevant research findings to policy makers at a time that is of help to them. As a researcher if I want to reach out to certain people it’s much easier and immediate than having to go through an academic journal. It allows niche markets to get even more niche.”
Jonathan Grant, senior fellow, RAND Corporation

Social media enables far more granular communication between different communities than traditional media. For example evidence produced by researchers can be channelled to the right policymakers far more rapidly and effectively. Initiatives such as the one⁶ described below will further enhance this process.

“As a nation we invest a hell of a lot of money into scientific and social research and a lot of that is to create very large primary datasets for people to use and reuse. At the moment the reuse level of some of that data isn’t very high. Many of the reasons for this relate to researchers not receiving appropriate levels of recognition and credit for their work so they are not always motivated to share it. We’re trying to address this by developing a system of unique identifiers that ensures the creators of data will always get credit for their work wherever it is used.

So as an academic you will always get recognition for creating valuable data – as you would for a journal article. It’s all contributing to the scholarly record. We can then create links between their work and those that are using it, so you end up with a valuable map that will lead academics to discover new resources. It should then make it easier to track the impact of one person’s work and then ultimately how it influences policy. It’s still early days but we’re working on it.”

John Kaye, lead curator, digital social sciences, the British Library

CHALLENGE

Social media requires a new social science

“Looking for evidence (in social media) is about interpretation, it's also about knowing where to look, knowing how to distinguish reliable information from unreliable sources. And it's about doing it in a way that can cope with very large volumes of data. I don't think any of the tools available at the moment are able to do that. There is a gap that has yet to be filled.”

Rob Procter, professor of social informatics, University of Warwick

Conceptualising social media research

Putting aside the difficulty of securing support and funding for a relatively unproven research tool, social media presents considerable tactical challenges for researchers.

A common temptation is to consider social media networks as providing large polling samples that naturally generate evidence. Rather, researchers must consider:

- Data from social networks is not something in aggregate. Data ranges from vast data sets spanning multiple networks to a handful of comments in an open forum. Research methods will necessarily vary according to the nature of the data.
- Social media isn't necessarily a social research resource in its own right. It should be seen as a complementary to other data and research.
- As with any information source, digital or otherwise, research will require intelligent techniques with correct weighting and correction to produce accurate insights.

It is also worth noting that:

- We have decades of experience of correcting traditional research methods. Although not perfect, they are highly evolved and we understand their limitations. Our ability to draw evidence from social media is in its infancy.
- Insights drawn from social media become useful and far more powerful when used in tandem with other social data and sources of insight. Like any data source, it can be used to corroborate, validate multiple data sources and vice versa.
- Data from social networks should be viewed as one data source in the rapidly emerging world of 'big data'. Any attempt to derive evidence from social media should be integrated into a cohesive data strategy.
- There isn't one research methodology for all types of social media.

“There is a significant range of skills required to make this kind of analysis possible. The techniques, be they technical, interpretive or analytical are still developing and are yet to come together in a complementary fashion.

The first step will involve a working group type approach to identify the initial set of skills required to make sense of this type of data – technological, analytical and social policy experts. Getting those people together would produce a more focused list of questions and a better understanding of which threads of expertise are required.

Starting small and asking some of the basic questions will slowly unravel the true nature of the challenge and the resources necessary to tackle it.”

Tom Pringle, principal analyst, Pringle and Company

Methodology

There isn't yet an established research methodology for drawing insight from social media; nor is there an accepted means to evaluate such research. The following challenges will need to be surmounted to establish an effective research methodology.

- Data from social media is the property of the owner of a site or third parties.
- Establishing information about samples, such as their demographic profiles, and the provenance, reliability and timeliness of data is a challenge in itself. This makes correcting the data problematic.
- Correctly weighting data for the wider population that does not have any kind of social media presence.
- Individuals behave differently in different environments; the online environment is no exception. New approaches to compensate for that need to be developed.

“The way I think about so many of these questions is to try and relate them to solutions that we have previously arrived at in the social sciences. When we weight evidence we look at the methodologies that underlie how the evidence was generated. There is a whole theory of knowledge from looking at philosophical assumptions to do with knowledge, to margins of error in statistics, the bias inherent in questionnaire sampling and so on. Overall weighting in social media research will therefore require an overall epistemology to be able to generate evidence. A fancy word, but all that really means is an understanding of what kind of evidence we are generating and how confident we can be in it.”

Carl Miller, research director, Centre for the Analysis of Social Media at Demos

“The media will change but the old issues remain. The challenges of representation and engagement are the same with social media as they are at a town hall meeting.”

Paul Clarke, formerly of the digital engagement team, Government Digital Service

“Of course, you will always have challenges in research related to bias and representation but there is a popular perception that social media is somehow different. Many people seem to believe that everyone is tweeting and that those tweets are a balanced expression of their views. And that is quite clearly wrong.”

Harvey Lewis, analytics research director, Deloitte

Some of these challenges are already being met. Research⁷ published in the Proceedings of the National Academy of Sciences (PNAS) has demonstrated that accurate estimates of Facebook users' race, age, IQ, sexuality, personality, and political views could be made simply from automated analysis of their Facebook 'likes' - information that is currently publicly available by default. This is one demonstration of how to establish the demographic profile of a sample drawn from social media, and consequently provides the means to correctly weight the data.

“There is also a school of thought that social media, albeit not particularly inclusive, is much more representative of a generation of voters and citizens that we know much less about. And that generation, which hasn't yet voted very often, is faced with an unprecedented level of social change: digital technology, paying for tuition fees, the recession and so on. Naturally, these factors are changing how they think so it is the most unpredictable generation so even if insights from social media only apply to a small demographic, it's still worth doing.”

Gareth Ham, head of political analysis, Brandwatch

“Before we even get into big data or open or linked data I think we still have some way to go with just data.”

Karl Wilding, director of public policy, National Council for Voluntary Organisations

The role of higher education bodies in turning data into rigorous evidence

New structures will be required to make the vision of robust evidence drawn from social media a reality. Effective research capability, drawing on skills from a broad range of sectors is required. The higher education sector, policy researchers and technology companies will need to collaborate far more closely.

The challenge for social science

“Digitisation is changing society. Data are now ‘born digital’ – they start life digitally and not digitised at a later date. Many social processes from local government administration to personal relationships are occurring through the web of digital networks that is now ingrained in our everyday lives. There's no escaping these processes. It's not a full-scale shift to the digital but an interweaving of the digital into daily life – everyone exists in some way as a set of footprints or traces through the web, and the existence and influence of the web shapes our social lives offline. In fact, what's really happened is that the boundary between ‘on’ and ‘offline’ has become so blurred that it's difficult to understand society without focusing on both simultaneously.”

In order to do contemporary research on society and social life it's vital that researchers are adventurous and innovative in engaging with the blend of ‘on’ and ‘offline’ activity that characterises people's lives today.

There's no standard set of methods and we need to be truly open to new ways of doing research in this field. Traditional research methods remain essential because the fine grain social processes of everyday life are exactly the location where off and online and knitted together – the use of social media being a prime example. However, digitisation necessarily presents researchers with the challenge to augment or supplement established methods in order to capture this new social reality.”

Dr David Mellor has been leading the development of the Economic and Social Research Council's Centre for International Social Media Research and is currently a researcher in cyber security at Oxford University

The higher education sector is already taking steps to exploit the potential of digital technologies to transform research; as demonstrated by the Arts and Humanities Research Council's (AHRC) Digital Transformations agenda and the Economic and Social Research Council's (ESRC) investments in social media and ‘big data’ research. Some of the most notable current initiatives include:

- The ESRC is developing a Centre for International Social Media Research as part of a portfolio of investments in big data. The Centre aims to develop tools and platforms for the analysis of social media and other forms of social data and provide a robust social media data source to the social science community. It plans to work closely with a range of businesses and public sector partners to maximise social and economic benefits.
- The Collaborative Online Social Media Observatory (COSMOS) is a social data analytics platform being developed by the Universities of Cardiff, Warwick, St Andrews and Edinburgh. It provides a set of tools for the harvesting, analysis and visualisation of social media datasets; and for combining them with other data sources such as the UK Census and British Crime Survey. COSMOS will start beta testing in September. It will be available to academic users later in the year and to users in other sectors in 2014.
- Demos' partnership with the University of Sussex to form the Centre for the Analysis of Social Media (CASM). The Centre produces political and social insight intended to meet the needs of policymakers.
- The Oxford Internet Institute is producing multidisciplinary studies focusing on the internet and its impact on society.

“The idea behind Demos' Centre for the Analysis of Social Media began when we started seeing a huge amount of public data that gives you a really interesting window on the social world. We saw the potential but wanted to explore it with academic rigour. It started with surveying far right groups on Facebook and I realised we were able to target these groups with an incredible level of precision and at very low cost. But there were still a range of ethical and methodological questions that we hadn't satisfactorily answered.

We'd been working with computer scientists at the University of Sussex to try and predict the results of X Factor through big social media data. That's the whole thing really: the extent to which you can use this data to understand what is going to happen in the real world. And at that point we realised the huge potential possible when computer scientists – who develop the algorithms and programmes – work closely with social scientists – who develop sampling methods, ethics and innovation with data – and together they start to develop a new discipline: social media science.”

Jamie Bartlett, director, Centre for the Analysis of Social Media at Demos

As these and other initiatives come to fruition they will open up the door for governments and those involved in public policy and service delivery to draw valid insights from social media.

“Could you imagine doing a proper analytical study of any recent social phenomena without also doing an analysis of the social media available at the time? Your immediate starting point should be a mining exercise of that data.”

Richard Stirling, commercial team, Open Data Institute

Framework for the natural evolution of social media and digital communication

By its very nature, social media evolves naturally. Governments cannot expect to direct or manage it with any success.

We have very little idea of what the next big social network will look like, assuming there will be one, or the extent of communication through social networks in five years' time. Our use of social media is still at a very immature stage. Any policy initiative to capture insights from social media must therefore be flexible enough to adapt to rapidly changing information structures.

“Should government develop its own social media platforms? Good grief no. The Government has a long history of trying and failing to create online engagement platforms. I would take a lot of persuading that the Government should go down that road.”

Michael Cross, journalist

“We're at the top of the hype cycle in relation to data. It's potentially data with any number of descriptors attached: big, open, geo-tagged. You name it.”

Karl Wilding, director of public policy, National Council for Voluntary Organisations

“I don't really know where social media will be in two or three years' time. I'm not convinced it will exist in its current form. It's very much a symptom of a transition.”

Roxanne Persaud, social innovation strategist

“Generally the internet isn't fully understood. It's analogous with where we were with the early days of the printing press. We've had a few years of it but we have no idea where all this is leading. We can't expect that we're going to find a fixed point in time where we come up with the perfect solution.”

Gail Kent, cyber department, Serious and Organised Crime Agency & Fulbright Scholar, Stanford University.

Adoption of data-driven insights

The challenge for any organisation seeking to draw insight from social media goes far beyond the technological. It also requires a range of skills to understand how to use that information effectively and incorporate the insights gained into the processes of the organisation.

“When it comes to the use of social media it's doubly difficult for the civil service. Below the senior civil service you're essentially an anonymous official. That is completely at odds with the openness and blurred personal and professional persona inherent to social media.”

Chris Yiu, head of digital government, Policy Exchange

“You've got to assure people that they're going to get into less trouble by communicating the wrong thing than they would be by failing to communicate the right thing. At the moment that's not the case, there is an entire culture to overcome there.”

Michael Cross, journalist

Social media monitoring agencies and other social media analysis services use proprietary web crawlers that search hundreds of millions of public web pages. These produce clean data that is more readily analysable than data typically available through free tools or search engines. This data is then analysed using quantitative and qualitative, automated and manual methodologies to understand what is being discussed online and where and how important or relevant it is to a specific issue.

However, some academic researchers argue their techniques, with roots in commercial market research and brand sentiment analysis, lack sufficient rigour and are subsequently inadequate for policymaking.

“There should be demand from government for both quantitative and qualitative research to understand, among other things, how visible and important an issue is to social media users.

Understanding how voters make decisions and who is influencing these social media users in the formation of their views is crucial to forming meaningful policy. Public sector bodies may also strive to engage with the conversation, rather than using social media solely for broadcast means.”

Gareth Ham, head of political analysis, Brandwatch

“It’s very difficult to look at social media and messy data sources without also using the latest big data tools to cleanse and work with large datasets effectively. The large cohort enables you to deal with the noisiness of the data. You need it to get the signal out rather than just the noise.”

Richard Stirling, commercial team, Open Data Institute

RISK

The potential rewards needs to be balanced with a clear understanding of the attendant risks

“There is a natural reluctance to spend money on new untested ICT activities. Government has been burnt in the past on large systems that failed.”

Chris Yiu, head of digital government, Policy Exchange

Government is in a uniquely difficult position. It has at its disposal a wealth of highly valuable personal data; health records within the NHS or welfare and pension data in the Department for Work and Pensions for example. It is also simultaneously responsible for protecting our privacy and rights. In the data reputation stakes it has the most to win and the most to lose.

A change in government strategy to make policy decisions on the back of insight drawn from social media will obviously not be taken lightly. It will almost certainly happen incrementally, but the level of risk involved should not be underestimated.

“Bear in mind that every personal data exchange between citizen and government is a hugely regulated business already and government is far more rigorous than many other sectors.”

Paul Clarke, formerly of the digital engagement team, Government Digital Service

There are a variety of reputational risks inherent in exploiting social media for insight and in adopting those insights. They include the following.

Privacy and a potential backlash

Social media analysis is now a mainstream activity for businesses, academics, intelligence agencies and governments. As part of the ‘big data’ revolution its use will continue to grow. Recent revelations about intelligence agencies’ use of social media data have pushed the issue into the open.

A study published by Deloitte⁸ in August 2013 revealed declining awareness of the extent to which organisations collect data and track online activity, particularly amongst 15–34 year olds. This is against a backdrop of growing and increasingly sophisticated data usage. A strong correlation was found between people’s willingness to share their data and organisations that were open and transparent about how it will be used. That willingness increases if the data is going to be used by public bodies and increases again if it is understood to be for a public good.

“Customers respond far more readily to brands and public bodies that engage with them about the use of their data. We are seeing organisations taking a much more mature and proactive approach to transparency and openness. Telling their customers what’s being collected, how it’s being used and what the benefits are. So the individuals can take an informed approach about whether they continue with that service or provider. And in a sense negotiate their own terms about the use of their own data. There may well come a time in the not too distant future when customers are far more discriminating about who they choose to interact and transact with based on the ethical approach organisations take to their data.”

Harvey Lewis, analytics research director, Deloitte

There are strong arguments for government to be more up-front about its data use; and for a tougher regulatory regime to make other organisations take a similar approach.

“If you’re happy for a commercial organisation to use your data it’s not a given that you’d also be happy for the government to use it. I think that’s a false argument. It’s mandatory, you can always sign off from commercial consent, but the government has the power of coercion. You have no choice about the re-use of your data.”

Michael Cross, Journalist

Individuals require clear and concise information regarding how their data is used; and simple ways to opt in or out. Fifty-page terms and conditions agreements too complex to understand do not meet that requirement.

“The most granular data is often the most useful but that’s when you’re most likely to invade someone’s privacy. And we haven’t yet had a proper debate with the general public to establish if they think the ends justify the means.”

Chris Yiu, head of digital government, Policy Exchange

The Dark Side

A democratic government reaping powerful insights from new data sources to develop better social policy and evaluate the efficacy of its current policies inspires little fear. But once that system is up and running what could it be used for as and when governments and society change?

Data security

Data security is an ongoing challenge for all organisations and is clearly critical to the public sector. Risk can never be entirely removed; it can only be continually managed. Informing public policy with insight drawn from social media will require refreshing data security policies.

“The risks are no different than they are with existing systems. We’ve seen people lose CDs with vast amounts of personal data being lost. As we change systems there will always be risks.”

Paul Clarke, formerly of the digital engagement team, Government Digital Service

Trust

Will people trust government decisions based on automated data collection more, because decisions are rules-based and an impartial process; or less, because they can only see a dehumanised robotic process?

“There are issues that will be of concern to the public beyond privacy. Public awareness is slowly growing about how data and information is used. This issue has started to leak into the mainstream media and people are hearing about algorithms and machines making choices that affect them. Many people may be concerned about this approach to using data.”

Tom Pringle, principal analyst, Pringle and Company

“Government should ensure that when they use people’s conversation in Twitter it is done so in a way that gels with the interest of that community.”

Dan O’Connor, director of research, RMM London

Loss of authority

Social networks help the public to amass expertise that has typically been the preserve of governments and those that deliver public services. This is already visible when health professionals are confronted by citizens armed with information from the internet.

This development presents a challenge to the government’s authority⁹ and its hold on expertise; but also an opportunity to reduce the cost of public services.

Digital exclusion and disenfranchisement

Digital exclusion – those without the skills or means to access the internet – is associated with social and economic exclusion. As communication and interaction on social networks become more widespread, the gap between the digitally included and excluded is likely to grow.

No-one is suggesting that the availability of insight from social media will make elections obsolete. But even though it is theoretically possible to weight insights from social media to compensate for those not online, it will be difficult to prove that is the case. Methodological failures will quickly become ethical failures with potentially dire implications.

“It’s not just a methodological issue, it’s an ethics issue. You don’t want only people with the access, the time and the cultural capital to dominate any aggregated data results. In a democracy everyone’s voice should be equal and this is why social media should never be the only source of information for a government doing social research. It’s useful but it’s never complete.”

Dan O’Connor, director of research, RMM London

“When it gets interesting is when you can get citizens to produce and implement policy in tandem with government. Social media can identify those citizens that have an interest in a specific topic, no matter how niche, and can contribute meaningfully. That often happens more at a local level where we are also much more likely to see innovation in the future.”

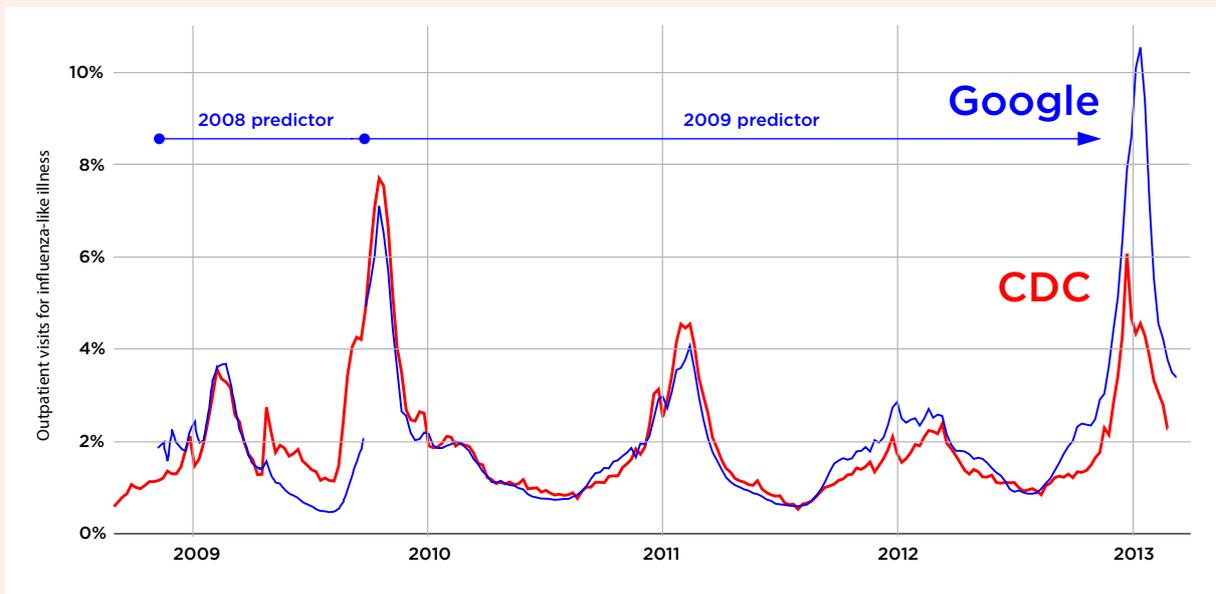
Giulio Quaggiotto, practice leader for knowledge and innovation at the United Nations Development Programme, Europe and CIS

“Some social media gurus see a future of social being integrated into everything and normalised. There is a mind-set that goes with that – open business and open innovation. But I’m not sure we’re ever really going to get there. I think the established ways are still very powerful and attractive.”

Roxanne Persaud, social innovation strategist

Google Flu Trends - a cautionary tale

Google Flu Trends uses aggregated Google search data – the number of searches indicative of people with flu – to estimate current flu levels around the world in near real time. Google benchmarks its data against the Centre for Disease Control's (CDC) emergency room admission rates. In the winter of 2012/13, as news of a spike in Google Flu trends indicators spread through news media it sparked more Google searches relating to flu, thereby skewing the data. Google's method appears to have exaggerated the flu outbreak's severity, exceeding the CDC's figures by almost 200 per cent.



Keith Winstein, Massachusetts Institute of Technology, after Cook, S. et al. (2011) 'Assessing Google Flu Trends Performance in the United States during the 2009 Influenza Virus A (H1N1) Pandemic.' PLoS ONE 6(8): e23610.

CONCLUSIONS

The almost instantaneous transmission of ideas through strong networked communities that share interests has been enabled by social media. As a medium it can produce valid and valuable social insight. It is challenging to do so but not insurmountable. Our ability to do it rigorously is still in its infancy.

Using social media to inform policy and enhance public services will also create problems, particularly in relation to privacy. Public concerns have been growing since intelligence agencies' surveillance of large volumes of personal data were brought to light by the Snowden revelations. Add to that public unease about the growing re-use of anonymised data and a clear threat to the future potential of social media emerges.¹⁰

Before those concerns reach a critical threshold, the Government should start a more thorough public debate and be up-front about the use of social media. As several other reports¹¹ on public sector information have noted, the Government should recognise that public data, first and foremost, belongs to the people that created it.

There is also a wider argument that government should take a greater leadership role in shaping the information environment and the role of emerging technologies in society that have significant impacts. Many organisations lack clarity about their role in the emerging information age.

Social media research also has limitations that should be recognised. As several researchers were anxious to point out, it should not be used in isolation or considered a panacea to replace other research methods. However, it's not going away. Its use will only increase and the way we use it to communicate will mature, thereby increasing its potential, particularly as more organisations depart from the almost ubiquitous view of social media as a function of the marketing department.

The UK is particularly well placed to take a lead in this field. In some ways it already is. It is recognised as a leader in open data policy.¹² Adding social media research to an emerging but increasingly coherent national data strategy is entirely feasible.

Democratic governments are obliged to develop insight about those they are elected to represent. And deliver the most effective and efficient public services as part of their social contract. Social media, part of the radical shift in the information environment engendered by digital technology, has the potential to further both of those aims. But, as Rob Procter one of the country's leading academics in this space points out, there still needs to be the political will to act on those insights.

“We will need to go into a more rational phase where we really work through the value of big data. No one has really understood, yet, how to harness big data in an effective way and how it can inform decision making. It's possible that more information isn't all that useful. I don't know. It's hard to predict. But what I do think is that what will ensue isn't quite what people are imagining at the moment. There is an assumption that decision making will become more scientific and more accurate, certain and reliable so decisions will be made with greater confidence and with more likelihood of the broad support of those affected. I don't think it's really as simple as that. Look at science and how it influences policy at the moment. In many areas scientific consensus doesn't make decision making more trusted. We're talking about processes that are social and political.”

Rob Procter, professor of social informatics, University of Warwick

“Most of the value of big data, indeed, is likely to lie far away from Facebook and Google – in buttressing existing information systems to give us a better picture of what is happening in the real world rather than simply harvesting more data about what people believe to be the case. And blind correlations, while occasionally useful for taking a punt or devising an early warning system, will not suffice; we’re going to need our theories and ideas more than ever.”

James Harkin, director of the social trend agency Flockwatching, writing in the *Financial Times*, March 1 2013

CASE STUDIES

Social media and international development

Some of the most striking examples of the power of social media come from the world of international development. They demonstrate the potential of social media to tackle social challenges when matched with other data sources and judgements made by people with a thorough understanding of local conditions. Widely accessible social media tools can enhance responses to disasters and accurately inform healthcare strategies.

As Giulio Quaggiotto, practice leader for knowledge and innovation at the United Nations Development Programme, explains:

“Disaster response is being completely revolutionised by social media. The Haiti earthquake was a bit of a watershed. Big development agencies effectively realised that they are not fast enough or sufficiently equipped to collect the vast amount of data generated from citizens on the ground in an effective way. Luckily self-organised, tech-savvy volunteers groups coordinated themselves through initiatives such as Crisis Mappers or Digital Humanitarians that set up all the tools to collect and analyse data from citizens. They then translate it, help verify it and send it back to all the development agencies. There is now even a manual¹³ for volunteer communities to collaborate with formal humanitarian organisations and a dedicated set of microtasking apps specifically designed for disaster response will soon be launched. Whilst the tools and methodology still need further refinement, accurate mapping of violence or disaster response needs is now possible – which is quite an extraordinary development.”

The crowdsourcing of data can be a very powerful tool:

“There are some compelling examples of when data has been crowdsourced by citizens. They effectively become distributed sensor networks. After the Japanese tsunami the government was saying there is no problem with radioactivity. So citizens went around with Geiger counters and mapped the actual levels of radioactivity. What they found was at times quite different from official sources and has now become the largest source of radiation data in the country. There are all sorts of examples of this being applied to other sectors: cases of corruption, torture, harassment of women and human rights abuses.

When coupled with appropriate tools for verification and knowledge of the local contexts, this crowdsourced information can be really powerful, particularly if it can empower citizens and public authorities to take more informed action. Having local communities involved not only in the collection, but also in the analysis of data can be a powerful way to build resilience.”

The rapid spread of mobile phone technology in developing countries is cited by some development agencies as the most significant change since decolonisation. Across the developing world mobile phones are far more than simply a personal means of communication; they are used to carry out trade and transactions. They are often a substitute for weak telecommunication and transport infrastructure and underdeveloped banking and financial systems. Much of the future growth of data in the developing world is expected to come from mobile phone use. Combined with other forms of social data, this data can provide development agencies with powerful insight into a range of socioeconomic indicators.

UN Global Pulse

UN Global Pulse was set up in 2009 by the UN Secretary-General Ban Ki Moon. It is a ground breaking initiative to track and monitor the impacts of global and local socioeconomic crises. It makes use of a growing number of digital data sources, referred to as 'digital smoke signals', to help understand human well-being; protect populations from shocks (both economic and physical); and obtain real-time feedback on how well policy responses are working on the ground.

Policymakers needed real-time insight into the social impact of a rapidly unfolding economic crisis in the aftermath of the 2007/8 financial crash. But the only data available was two to five years old; in some countries poverty indicators were up to ten years old. Traditional statistics, household surveys and census data could only reveal medium to long-term trends; but not the type of real time, accurate understanding required to protect hard-earned social development gains. Global Pulse was the UN's response.

It is effectively an innovation lab focused on understanding how to make best use of digital data for early detection of spikes in major social issues such as unemployment or food prices. It has already identified a number of sources of real-time digital information that can be relevant for global development monitoring, including:

- Social media and online news: public news sources, blogs, web forums, and public content from social networks such as Twitter and Facebook.
- Online advertising: public e-commerce sites and websites created by local retailers that list prices and inventories.
- Transaction records: anonymised records of the usage of financial services, including purchases, money transfers, savings and loan repayments.
- Communication records: anonymised mobile phone usage records.
- Web searches: anonymised records of search queries and trends in subscriptions to automated information services.

The proliferation of data presents new challenges to development organisations and a demand for new skills. Again, Giulio Quaggiotto explains:

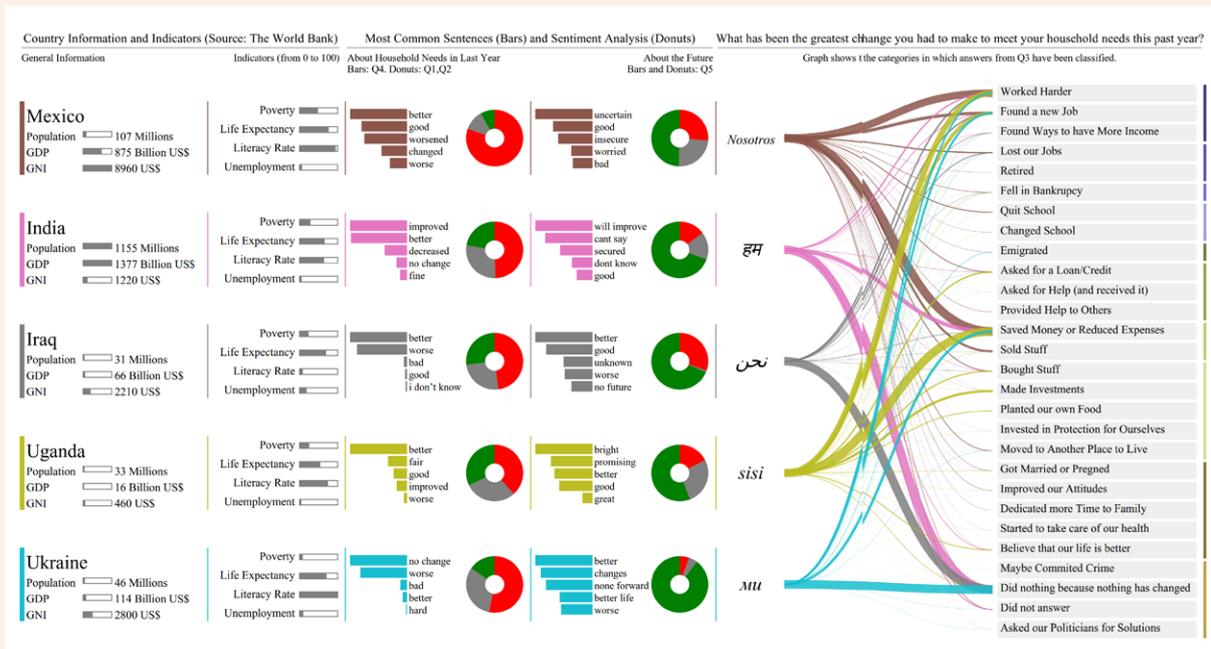
“What’s happening is that our role is changing. Often we do not have to invest in collecting data in the traditional way, it’s now more about verifying the data and making sense of it. We need to develop our data literacy, a whole new set of skills. Traditionally we did not have enough information now we often have the opposite, a deluge of data. So the challenge is making sense of it, next to real time and then persuading decision makers at all levels that they need to act on it. In a world of increasingly interconnected and rapidly emerging crises, traditional ‘linear’ policymaking is increasingly being challenged.

This is going to be a new discipline – at the intersection of policymaking, data analysis and technology. Poverty specialists, governance or environmental specialists will be working together with the new breed of data scientists.”

Such powerful tools do not come without risks:

“The use of this data raises a whole range of ethical issues. If your government has access to all your data are you at risk? How do you develop what we call trust frameworks – giving some level of comfort to citizens that not everything they do is being tracked

whilst still being able to provide valuable information to policymakers? How do we ensure that those without access to any technology whatsoever are still heard? Once citizens know how the algorithms work will they try and trick them? Should we mandate companies to release anonymised data because the public interest is sufficient? We're just at the beginning of understanding these issues."



UN Global Pulse visualisation by Eduardo Graells-Garrido and Ruth Garcia-Gavilanes. Visualizing.org

Global Pulse is also trying to encourage a new type of corporate citizenship: data philanthropy. Private sector companies would share data with agencies such as the UN, for the public good. It presents the idea as not simply an exercise in corporate social responsibility; but as a business risk mitigation strategy. If a company's data can help a population avoid the worst impacts of a natural disaster, it is more likely to have economically active customers.

The idea is gaining ground and several large companies have been providing data to the research community. For example, telecommunications company France Telecom–Orange recently made anonymised records of five million mobile phone users in Cote d'Ivoire available for analysis, to identify global development related trends.

The vision faces several challenges. Appropriate legal and regulatory frameworks that respect individual privacy and corporate competitiveness will need to be developed. It's still early days, but the idea of developing a global data commons – a shared cultural resource freely available to everyone – is being seriously considered.

Other notable examples of the impact of social media in the developing world:

- Rwanda's health minister holds regular 'Monday with the Minister' Twitter meetings to gather input from citizens and solve concrete problems.
- A UNDP project on reporting cases of corruption via online information collection, Ushahidi, has led to some cases being prosecuted.

- A project to provide feedback on the decentralisation process is providing local authorities in Macedonia with insights on issues experienced by citizens.
- Some Uganda MPs use a Twitter-like tool to regularly poll their constituencies on key issues.
- Kibera in Nairobi, Kenya, was a blank spot on the map until November 2009, when young Kiberans created the first free and open digital map of their own community. Map Kibera has now grown into a complete interactive community information project.
- UNICEF recently used social media to track the rise of online anti-vaccination sentiment in Central and Eastern Europe.

Understanding political influence through social media

Tweetminster began life as a simple service to help people find and follow their MP on Twitter, in late 2008.

Its two founders sensed that data flowing through Twitter would become very important due to its relevance to news media and politics. As Alberto Nardelli, one of its co-founders, explained:

“ We didn't know what that meant and obviously that wasn't a certainty – there were only four MPs on Twitter at the time. So we used the election as an opportunity to build technology and see what worked best.”

The company built a technology that allows users to discover and analyse trends around a topic, industry or market and packages it in a way that is useful. It is available as a free public service and as an enhanced, paid-for public service based. It is a simple way to navigate through everything posted on Twitter.

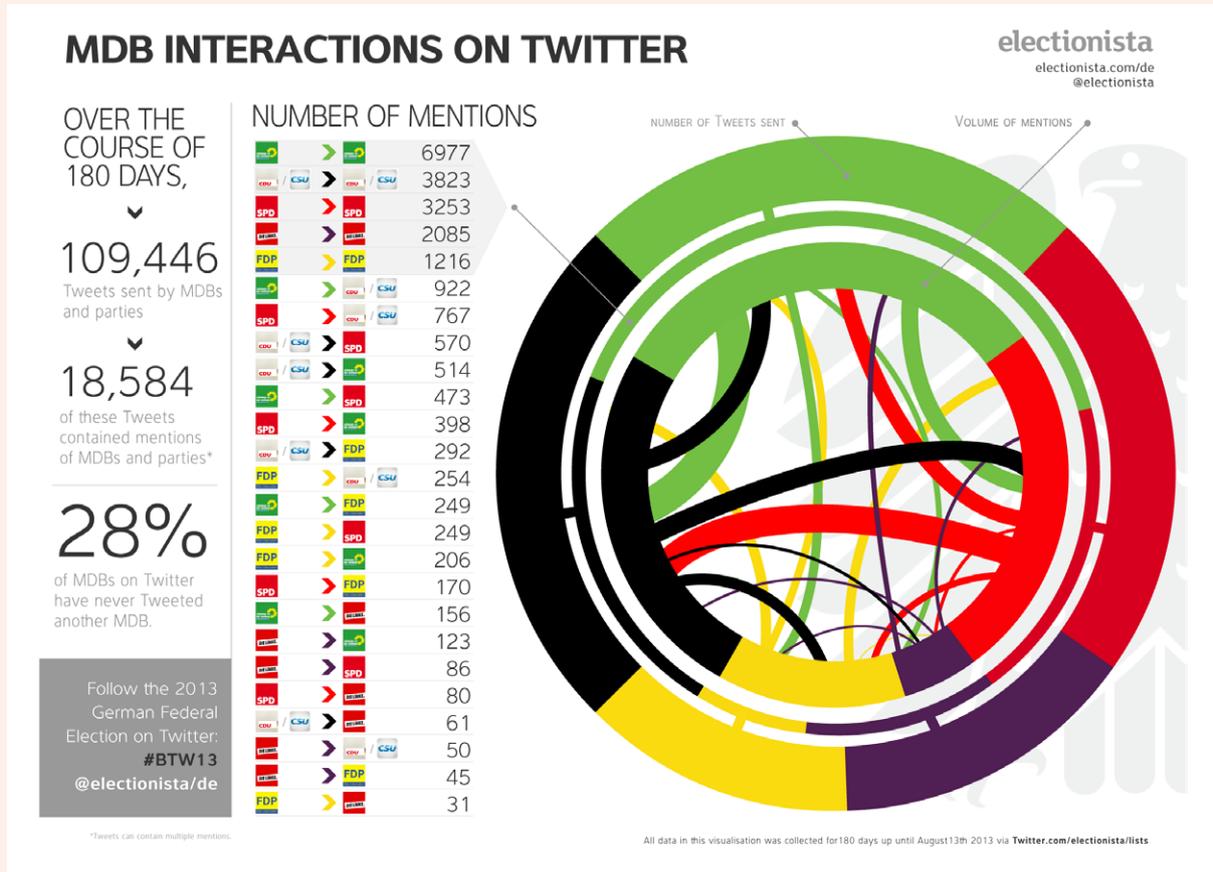
Now with 400 MPs online it also provides a service called Electionista – a free political monitoring service covering more than 100 countries. Its core commercial product provides deeper analytics and extensive search functionality within those political networks. Reuters, the BBC and governments around the world subscribe to this service.

Alberto Nardelli explains why the information his company is exploiting is so valuable:

“ It's not clear what people understand when they say Twitter – they think of Twitter as a network and say it's not representative and compare it to polls, for example. That is the wrong way to look at it – look at it as an information platform and then you start looking at what influential people who create the news are saying. The media, and I do not simply mean mainstream media, does influence public opinion. From a communication and a policy perspective that's very, very valuable.”

It's less about the representativeness of the platform as a whole; it's more about the representativeness of the expertise and the influences within whichever topic you're interested in. Because obviously you can't poll the population from Twitter; but let's say you want to understand the views surrounding a health issue then you have a great opportunity to gather the opinions of experts on that specific topic by monitoring Twitter data. That can be valuable evidence to inform policy.”

Over the course of 180 days to August 13 2013, German members of parliament or Mitglied des Bundestages (MDBs) and political parties tweeted 109,446 times.



What do governments typically want from these services and why?

“What are media and influencers saying about things the UK Government cares about? Not just in the UK, but internationally. Who are the people who shape opinion in these areas of interest? Which industries have the most impact on a specific issue within information platforms?”

The biggest challenge, not just within government but also for news organisations, is understanding where the value is and what data is actually useful. Tweetminster analyses the tweets within these networks to discover which influencers are paying attention to which tweets, the most shared news stories, the trends and the people shaping and driving the conversations. And not thinking data per se is valuable but which is the news angle getting the most traction within an issue.”

Law enforcement and social media

Social media already plays a role in crime detection, prevention and providing general insight to law enforcement entities. Once again, when combined with other data sources its potential comes to the fore. Overlaying social media data with crime maps and other data can greatly enhance the allocation of resources.

Revelations in the press about the use of social media data by intelligence agencies on both side of the Atlantic has pushed the issue up the agenda. Whatever the precise nature of those activities it reveals that intelligence agencies see significant potential for automated analysis of large volumes of social data. It also demonstrates the fraught nature of privacy rights for the public sector as it grapples with this emerging global technology.

Demos, the think tank, has published several papers looking at the role of social media in intelligence gathering. In #INTELLIGENCE the challenge for our society is clearly articulated:

“Social media does not fit easily into the policy and legal frameworks that guarantee to the public that intelligence activity in general is proportionate, accountable, and balances various public goods, such as security and the right to privacy... Consequently, ways of managing the possible harms associated with the state accessing and using social media data have to be understood. This is why social media intelligence cannot be readily fitted into the current framework that manages the state's intrusion into people's private lives.”

Gail Kent works in the cyber department of the Serious and Organised Crime Agency. She is currently on a Fulbright scholarship at Stanford University's Center for Internet and Society, where she is developing proposals for an international framework for information sharing between law enforcement agencies and internet companies. Gail discusses the potential that social media has in law enforcement and its challenges:

“If someone has committed a crime that has nothing whatsoever to do with the internet, often more can be understood about that person – their motivations, their contacts – from looking at their online traces than from entering their home. Which websites is that person visiting? Which forum is that person part of? What discussions is that person having? What links do they have on social media networks?”

Communications data has played a role in 95 per cent^{t4} of all serious organised crime investigations and every major Security Service counter-terrorism operation over the past decade, and that is any means of communication, it includes your online activity. We've moved on from it just being about who you call.”

Gail explains how regulatory and legal frameworks in the UK are playing catch-up as our use of the internet develops:

“If I'm trying to understand someone – which email account they have, how they access the internet and so on – that is actually far harder than it sounds. In this country we have the Regulatory Investigative Powers (RIP) act for legally obtaining communication data but it lacks clarity on some of the most common internet activity – there is no general agreement now on what is subscriber information, what is content and what is traffic. So often getting the most basic information will require a court order under different legislation, the Police and Criminal Evidence Act, also not created for new types of communications data. And then this only applies to information held in this country. If the data is held overseas you have to use international mutual legal assistance which are convoluted international treaties that can take months and months. And then you could discover that information might never have ever been relevant. But if there is a threat to life then everything steps up a gear and there is a different set of protocols.

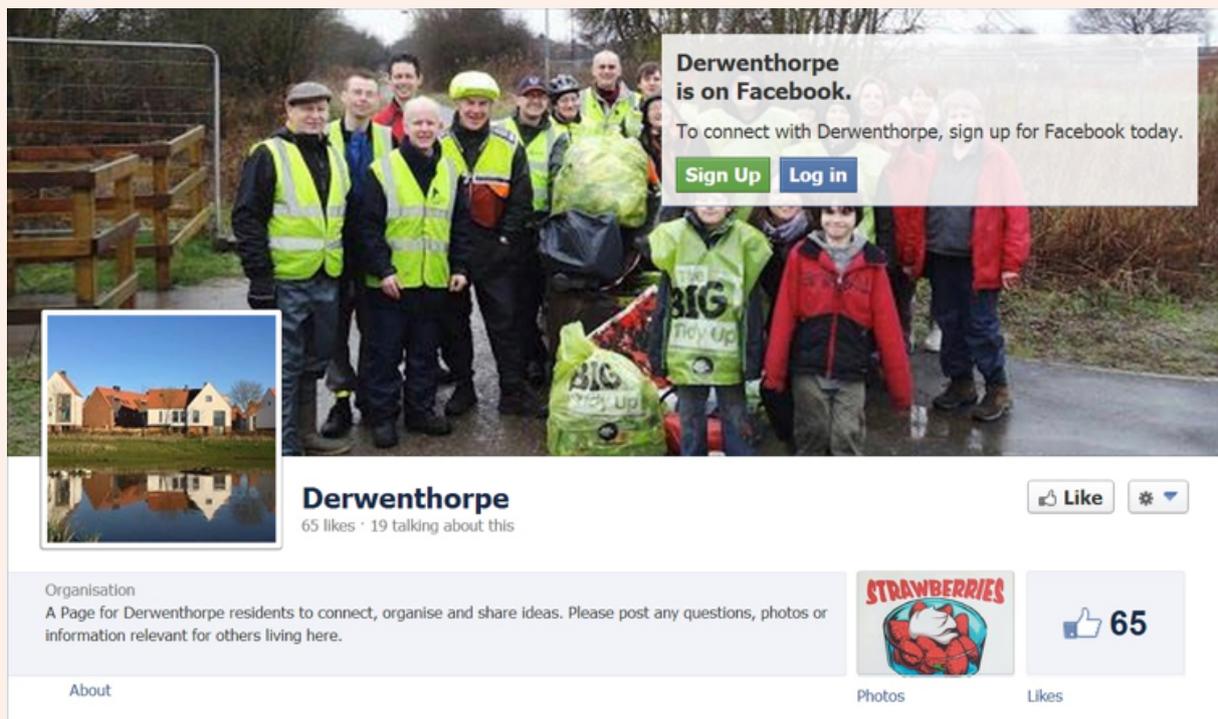
Can we not develop a system that would enable me as a UK law enforcement agent to get information as quickly, as legally and as proportionately from America, or wherever it's held, as I could from the UK? Can we develop a system that is well understood by the public and balances the need for privacy and security?”

On balancing the needs of law enforcement agencies and privacy and human rights law:

The RIP Act and the Human Rights Act are incredibly strict about our rights. In my experience of law enforcement it is something we think about all the time – the proportionality, necessity and justification for obtaining that information. We wouldn't just monitor someone's publicly available Facebook page without the correct authorisation – to us that isn't legitimate; we couldn't just stand outside someone's house all day. But this helps our relationships with the major technology companies because they can see our respect of human rights principles.

“As people move further away from traditional communication methods, law enforcement will have to devote more resources to understanding and using social media. It will become more important to every area of law enforcement but we'll always be conscious that we do not want a big brother state. Primarily because all law enforcement officers are also people but fundamentally its simply not what our mission is about.”

Social media improving community cohesion and reducing demand on public services



Derwenthorpe is on Facebook.
To connect with Derwenthorpe, sign up for Facebook today.
[Sign Up](#) [Log in](#)

Derwenthorpe
65 likes · 19 talking about this

Organisation
A Page for Derwenthorpe residents to connect, organise and share ideas. Please post any questions, photos or information relevant for others living here.

65

About Photos Likes

In 2011, construction started on Derwenthorpe, a new 540-home village in East York. The village is a mixed community development consisting of privately owned homes, shared ownership and homes for social rent managed by the Joseph Rowntree Housing Trust (JRHT).

A couple of residents suggested a Facebook page for JRHT staff and residents to share information about Derwenthorpe. JRHT set it up but left its purpose and structure open for residents to develop. Soon residents began to connect and post on it and new connections were made.

Residents posted calls for interest in social events helping new neighbours to make friends. If a resident posted a query or problem it was often swiftly answered or resolved by another resident. Simple problems such as operating the heating system or missing recycling bins were resolved immediately. JRHT staff offered help and support but it was rarely needed.

When an electric fault left residents without hot water for a few hours the member of staff dealing with it provided out-of-office-hours updates on the Facebook page via her mobile phone. Frequent and important updates were instantly available to all residents.

James Grant, the JHRT social media and digital inclusion officer who manages the page, said:

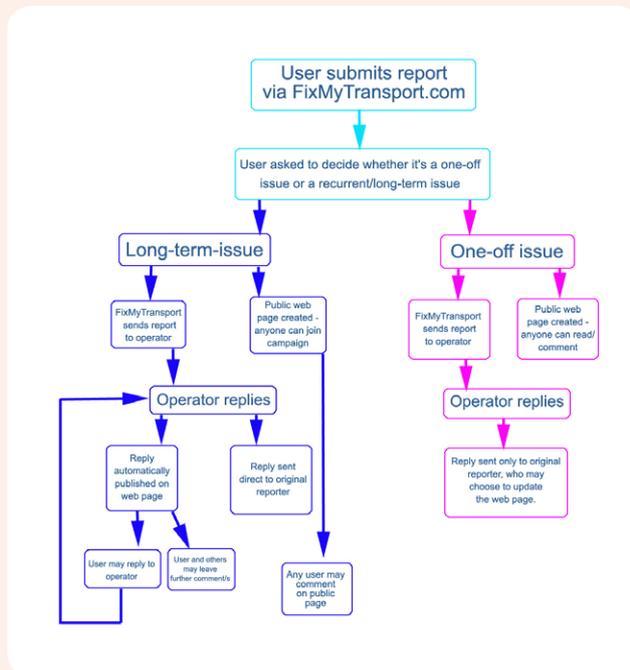
“Social media enables service providers to help customers to help each other, which creates efficiency savings for both parties. As a charity we’re very concerned with social and digital inclusion so we’re also pleased to see the Facebook page encouraging neighbours to connect and share with each other. We could immediately see it helping residents to integrate effectively with each other and established local communities in neighbouring residential areas.”

Good public service delivery increasingly relies on effective communications. On a local level, social media can be used as an extension of the garden fence over which neighbours exchange necessary, relevant and important information. It enables us to exploit the power of hyperlocal knowledge to keep customers and staff informed about what’s going on.”

Social media enhancing public services

FixMyTransport is an independent website, built and managed by MySociety, a not-for-profit organisation. Its aim is to increase accountability and transparency in public transport. It’s a simple process – anyone can report a transport problem in Great Britain: a late bus; an incorrect timetable; a train that doesn’t show; and so on. It covers over 30,000 bus, underground, ferry, metro and train routes, stations, and bus stops – with a separate page for each. The problem is sent to the transport operator, and published on the website at the same time, so that others may read, comment, and add their support or advice.

FixMyTransport acts as a mini campaigning hub for a disintegrated transport system. The process itself is social and open; and is enhanced by users broadcasting the issue through social networks. It enables a centre for effective online activism by disseminating and amplifying the message amongst the general public and raising the reputational stakes for transport service providers.



Cambridge has the UK's highest number of cyclists. A long-running battle by the Cambridge Cycling Campaign to improve bicycle parking at Cambridge rail station achieved its aim when Cambridge City Council announced the go-ahead for a multi-storey bicycle park with 3,000 spaces. The FixMyTransport page for the campaign attracted 260 supporters and played its part in adding pressure to the Council to address the issue. As Myfanwy Nixon, MySociety's marketing and communications manager, explains:

“When a campaign gets that big it reaches its own critical mass, because every time someone leaves a comment on the page, it is mailed to every other supporter. This encourages repeat visits, further discourse and the potential for collective action.”

Currently FixMyTransport receives over 250,000 unique visitors per month. After search engines, Twitter and Facebook provide the most referrals.

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Credits

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ENDNOTES

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The PDF of this report includes hyperlinks to research where available.

LITERATURE REVIEW

The following literature was reviewed for this paper as part of the research process.

These research papers may not all have directly informed this report but could be useful to the reader.

Academic research

Research title	Publication or publishing organisation	Author(s)
Information policy and social media: framing Government – Citizen Web 2.0 Interactions	Journal of Public Administration and Information Technology	Paul T. Jaeger, John Carlo Bertot and Katie Shilton
Greater Choice and Control? Health policy in England and the online health consumer	Policy and Internet	John A. Powell and Sharon Boden
Private traits and attributes are predictable from digital records of human behaviour	Proceedings of the National Academy of Sciences of the United States of America	Michal Kosinski, David Stillwell and Thore Graepel
You are what you tweet: analysing Twitter for public health	Johns Hopkins University, Baltimore, USA	Michael J. Paul and Mark Dredze
The second wave of digital-era governance: a quasi-paradigm for government on the web	The Royal Society	Helen Margetts and Patrick Dunleavy
The internet and public policy	Oxford Internet Institute	Helen Margetts
Harnessing the cloud of patient experience: using social media to detect poor quality healthcare	British Medical Journal	Felix Greaves, Daniel Ramirez-Cano, Christopher Millett, Ara Darzi and Liam Donaldson
What are the police doing on Twitter? Social media, the police and the public	Policy and Internet	Jeremy Crump, Cisco Systems

Public sector research

Research title	Publication or publishing organisation	Author(s)
Unlocking the power of public information	UK Cabinet Office	William Perrin
Exploring social media as a tool for knowledge	Third Sector Research Centre	Amy Burnage and Roxanne Persaud
Shakespeare review - an independent review of public sector information	UK Government	Stephan Shakespeare

The Power of Information: putting all of us in control of the health and care information we need	UK Department of Health	
Digital guidance and best practice for the health and care system	UK Department of Health	
Big Data for development: challenges & opportunities	UN Global Pulse	Emmanuel Letouzé

Private sector research

Research title	Publication or publishing organisation	Author(s)
Social media “likes” healthcare	PwC	
Reaching new depths in consumer intelligence	Acxiom	
Data Nation 2012	Deloitte	
Data Nation 2013	Deloitte	

Think tank research

Research title	Publication or publishing organisation	Author(s)
Policing in an information age	Demos	Jamie Bartlett, Carl Miller, Jeremy Crump and Lynne Middleton
How to measure and manage harms to privacy when accessing and using communications data	Demos	Jamie Bartlett and Carl Miller
The Big Data Opportunity: Making government faster, smarter and more personal	Policy Exchange	Chris Yiu
#Intelligence	Demos	Sir David Omand, Jamie Bartlett and Carl Miller
Can social media help analyze public opinion?	Rand Corporation	Paul Steinberg
@metpoliceuk how twitter is changing modern policing	Demos	Jamie Bartlett and Carl Miller

The PDF of this report includes hyperlinks to research where available.

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