



# SOCIAL MEDIA RESEARCH AND POLICING



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**Abstract:** The paper reviews academic literature which is relevant to the better understanding of the police use of social media. It concludes that much of the practitioner literature has focussed on issues of adoption. Academic work has supported this in its focus on authorisation and legitimacy. Other research has looked to use social media as a source of big data in support of predicting social trends and operationally significant shifts in public behaviour. This is inherently problematic, as social media researchers in other fields have shown.

Research into social media usage by the police is still a relatively new field, and there are benefits to be had through closer collaboration between disciplines. There is a pressing need for more research, particularly ethnographic research, into the impact of new communications media on the internal working of policing organisations and on their interactions with the public.

## 1. INTRODUCTION

In this paper, I look at some of the work of practitioners and academics about social media usage by the police. I argue that most of the practice based evaluation is rooted in a discourse about the advantages of adoption and barriers to adoption. The academic work has a number of strands. One focuses on regulation and authority, which is within the adoption discourse. A very different one looks at social media as a source of big data with a view to creating predictive model of future major events, such as disorder. I conclude that there are major themes which have yet to be explored, and in particular the organisational impact of new, relatively open communications channels in hierarchical organisations which necessarily rely on command and control models for their operations. I note that research into social media in policing has yet fully to exploit some of the opportunities which online ethnography and the sociology of networks offer. There remains much

to be gained from a closer relationship between social media scholars and the police research community.

Police organisations in a number of countries began to look at social media as both a source of knowledge about the communities they police, a source of intelligence about the activities of people of interest to them, and as a channel for communications with the public at the same time as platforms, such as Facebook, achieved significant popular presence. Innovators in police organisations began what were often local, small scale experiments with the new media, and they began to reflect on what they had learned. Three major events have raised the profile of social media in the policing world and attracted political and media interest. The Arab Spring, the London riots in 2011 and, since June 2013, the revelations made by Edward Snowden about relationships between social media companies and the national security agencies have all underlined the significance of social media for policing and law enforcement, as well as national security. These have properly attracted the attention of researchers. The more modest police experiments in the use of social media have been studied in less detail by the academic community. I argue here that, while there is no shortage of practitioner reflection on these innovations, there is scope for a lot more, and more challenging, research into the institutional impact of social media on routine policing.





Much practitioner work has aimed at raising awareness of the opportunities presented to the police and emergency services by new platforms. There is a growing literature of experiential case studies by practitioners themselves — the Queensland experience in the floods of 2011 (Queensland Police, 2010) or the Greater Manchester Police experience of using Twitter (GMP 2011) to raise public awareness of the range of their control room activities. Indeed, much of the efforts of organisations such as the College of Policing in the UK, or the IACP Center for Social Media in the US can be seen as a bringing together lessons learned from this practical experience.

A comparative approach is taken in ‘Best Practice in Social Media Adoption’ by published by the Fraunhofer-Institute as part of the FP7 COMPOSITE programme (Denef 2012), comparing practice in 13 countries, using as data interviews with practitioners. Denef summarises the aims of this work and describes how COMPOSITE has identified the emergence of social media as a pressing issue for the police. The programme takes the view that social media can support the police in engaging in a closer dialogue with the public, support the identification of missing people and help large scale police operations in crises situations. Social media, however, also threaten the police, as offenders, for instance, increasingly use social media to coordinate their actions. Social media makes police actions transparent and challenges the ways in which the police operate.

## 2. RESEARCH THEMES

The need to understand how the police could best exploit social media was made more urgent by the experience its use by non-state actors in public order incidents such as the anticapitalist protests of 2010 and the UK riots of 2011, and by the debate about the role of social media as a tool for popular organisation in the early phases of the Arab Spring in 2011. But while, in the UK at least, there was political pressure to react and develop operational capability, variously articulated by Ministers and the regulatory body HM Inspectorate of Constabulary, there was less pressure for reflection on practice in order to understand whether more profound changes in police organisations and their relationship with

the public which were being brought about by social media.

There is a strong element of advocacy in the practitioner material. There has been the development of a community of social media users within police forces and organisations, which is highly committed to spreading what they see as an innovation of undoubted value to as many colleagues as possible. Indeed, one of the fundamental questions, which COMPOSITE addresses, is ‘how to explain the issue of non-adoption’.

In parallel, the academic world to some extent, think tanks to a greater extent and the press most of all have developed a discourse about the changing nature of the policing task which has been brought about by the emergence of social media. This is manifested in three ways:

The emergence of new forms of crime and antisocial behaviour — online pornography, bullying, verbal sexual abuse, new types of fraud;

The opportunity afforded to law breakers to improve their own communications and so present new risks — rioters, terrorists most spectacularly;

The development of new opportunities for the police to create and develop sources for intelligence, either in relation to the investigation of particular offences, covert investigation of groups and organisations, or the analysis of wider social trends as a basis for predictive policing.

In this last case, social media has become one of a number of sources for big data analysis. The examples, which have been discussed, include big data correlations in relation to natural emergencies as much as to criminal or public order trends.

Much of this debate has become focussed on issues of legitimacy and the safeguards for the public in respect of the enhanced capabilities of states to mount surveillance operations against social media usage. This is after all at the heart of the Edward Snowden case and the subsequent public debate about whether the US authorities have been complying with their own regulatory requirements or not (Greenwald 2013). For social media more generally, the work which Jamie Bartlett has led at Demos (Bartlett *et al.* 2012), has identified the challenges which





social media provide to existing systems of authorisation and regulation, particularly when applied to the collection of analysis of material produced by individuals on social media sites but which are openly accessible. There has been similar discussion in recent work by Eijkman and Weggemans (2013) and extensive further discussion now seems inevitable following the disclosures about the activities of the NSA.

There has been less exploration of the effectiveness of social media usage. This is of course not to suggest that police engagement with social media has no effect. Police communications leads and investigators alike would have little time for it if this were the case. But there have been relatively few attempts systematically to look at what is different about the way the police interface with the police works when it takes place in social media environments, and how that interacts with, and changes, non-virtual environments — in so far as this is a useful distinction to make. (Bartlett 2013).

Assumptions that are made about the impact of social media use need to be well founded in evidence. Even if impact seems to be intuitively likely, and supported by anecdote, there is still a need for scrutiny. For example, in discussing social media as a means of pushing information, COMPOSITE (Denef *et al.* 2012) speculates that

‘[w]hile not every citizen is using social media at all or is a member of the popular networks, social media encourages sharing information across people and networks, so that even citizens who are not directly subscribed to a police force’s information can also receive the updates through their friends. By using social media in this way, police forces become more independent from the press and open to immediate connection to the general public’ (p.18).

This touches on a number of issues which invite further investigation and call for data. One is about the relationship between the mainstream press and social media. Social media are unquestionably of increasing importance as a source for mainstream journalists. This was notably evidenced in the Arab Spring. There now appears to be some consensus that the crucial element is the interaction between social media and conventional media — and real world protest in this case.

It is not necessarily the case that social media have had the disintermediating effect implied by COMPOSITE. Manuel Castells (2012), for example, considers that in Tunisia, ‘there was a symbiotic relationship between mobile phone citizen journalists uploading information to YouTube and Al Jazeera using feeds from citizen journalists and then broadcasting them to citizens at large’. Nor should we assume that the way these relationships work in a particular situation, as in extreme events such as riots or popular demonstration against the government, is a good guide to how people get information from social media or the press in, for example, less tense neighbourhood policing contexts.

There are also signs of uneven development in the way social media are having impact on the press’s conceptualisation of its role, and of others’ appreciation of it. The discussion of police and press relationships which occupied public attention in the UK in 2012 during the Leveson Inquiry into the culture, practice and ethics of the press (Leveson 2012) is a case in point ( ). The very cautious acknowledgement that things were changing as a result of social media suggests at least that there is scope for more research.

### 3. FURTHER DIRECTIONS

There has been extensive academic research in non-police contexts about online behaviours and identity, the relationship between online networks and other social networks and users’ attitudes to privacy, but this academic discourse has largely left policing to one side. This suggests three areas where the work of researchers can be further developed and applied to policing practice. The first theme is about quantitative research and the boundary between quantitative and qualitative work. The other two are about the scope for more qualitative work.

#### 3.1 BIG DATA

Social media are a source of unprecedented amounts of data, a lot of it personal data in that it’s about individuals, and much of it apparently openly available and public at the same time. This looks like a boon for social scientists and investigative organisations like the police in equal measure. Both are attracted by the sudden





availability of what looks like very immediate information at a low cost. This is against a background in which not only are budgets under pressure, but the inherent costs of data collection and analysis, and of information assurance, have historically tended to rise. The sociologist George Homans said in 1974 'The methods of social science are dear in time and money and getting dearer every day' (cited in Goulder 2010). Now, in Vint Cerf's words, 'We never, ever, in the history of mankind have had access to so much information so quickly and so easily' (cited in Boyd 2010).

Danah boyd reminds us that what gets lost in this excitement is a critical analysis of what this data is and what it means (boyd 2010). She raises five cautionary points about the limits of big data as a research tool. Although Boyd does not consider the application to policing, these are of particular concern in trying to use social media data as a basis for predictions of large scale social behaviour, such as crime trends or possible hotspots for disorder.

Boyd's first point is that 'Bigger Data are Not Always Better Data'. Big Data isn't always a whole data set. Twitter has all of Twitter. But most researchers don't have all of Twitter. At best, they have access to the set of public tweets. It is more likely though that they have the stream of public tweets from the public timeline. These tweets aren't even random, nor is it apparent, what selection processes are actually at work in the creation of the sample.

The second is that 'Not All Data are Created Equal'. Big Data introduces two new popular types of social networks derived from data traces: articulated social networks and behavioural social networks. Articulated networks are those that result from the typically public articulation of social networks as in the public list of people's Friends on Facebook. Behavioural networks are those that are derived from communication patterns and cell coordinates. Each of these networks is extraordinarily interesting, but they are not the same as what sociologists have historically measured or theorised in discussing social networks.

Boyd goes on to remind us that 'What and Why are Different Questions', in other words why people do what they do online cannot be read from what they do in any simple way. Hence it is also necessary to 'Be Careful of Your

Interpretations'. Finally, she advises that 'Just Because [the data] is Accessible Doesn't Mean Using It is Ethical'. This is of particular concern for law enforcement authorities and takes us back to the discussion about authorisation.

In other words, social media aren't as easy to exploit as may have been hoped, and some kind of operational benefits are unlikely to be straightforward to realise. The COSMOS project, based at Cardiff University, identifies four issues in particular for the police. Dealing with these is a current challenge for computer scientists and social scientists alike who are working on police data sets. The project has highlighted the problems for researchers of handling material in bulk. COSMOS archives and collects 350 million tweets per day (1 % total). Data from social media often comes with a relative lack of metadata, such as information about location or the identity of the author. The content may provide no easy means of distinguishing rumour from useful intelligence (although this is not a unique problem for social media data). Finally, and perhaps fundamentally, the reciprocity between online expression and offline action is still largely not understood. Further investigation is necessary before full advantage can be taken of the new digital tools of 'neighbourhood informatics'.

In their analysis of social media use during the 2012 Olympics, COSMOS concludes that not just real world events (such as UK gold medal wins) but also media comments about those events drove peaks in tweeting about games. This has led to the conclusion that the results achieved through this kind of research 'provides the means of beginning to treat social media data (and its analysis) as a social scientific measure of the pulse of the world' (Burnap *et al.* 2012)

In a recent paper in the international journal *Policing and Society*, Martin L Williams *et al.* (2013) from the COSMOS project have looked to apply this approach to the way that police forces in the UK to assess tension i.e. potential civil unrest and public order issues. They argue that the 2011 riots demonstrated the existence of what they describe as cyber-neighbourhoods but that the police had only limited success in collecting and using intelligence from these new neighbourhoods. To do so successfully requires bespoke tools which can be measured against existing sources of intelligence.





Existing guidance to the UK police about the use of intelligence about potential public unrest recommends the use of both conventional qualitative and quantitative indices. COSMOS proposes that analysis of social media communications is also used. They believe it may reorient both police and public understanding of tension and social cohesion through reference to the mass of user-generated accounts of social problems in particular contexts and in near, and possibly real, time. If the social media can be adequately sampled and used to indicate 'offline' behaviour, the analysis of this kind of data could be a revelation in broadening public understanding of civil unrest and attenuating dependence on elite, retrospective, constructions of social problems.

The COSMOS paper concludes that extremes in positive and negative sentiment are not directly related to tension and that tension detection requires more than sentiment analysis alone. Both sets of results provide evidence that their social media tension-monitoring techniques are faster than human coders, and can handle more data, and are more accurate than other machine supported classification engines.

It is apparent that sound conclusions based on these new methodologies are likely to be limited in their scope. This looks like the beginning of the development of operationally effective analytical tools, not the end of it. The use of social media fits into a context in which there are also existing sources, and that means that there is a need for examination about how the organisation uses information in order to make decisions. This takes us outside the realm of computer scientists.

### 3.2 NETWORKS, STYLE AND IMPACT

In 2010, I did a very short piece of research into the use of social media by the UK police for citizen engagement (Crump 2011). I relied heavily on the work which Nick Keane (now of the UK College of Policing) had done in bringing together practitioners in UK police forces, and in mapping the extent to which the various forces were exploiting this opportunity. What I particularly wanted to look at was how notions of online community related to that of community policing, since it was in the context of neighbourhood policing that forces were experimenting with allowing front line officers to manage accounts on behalf of the force. I wanted

to ask the question of how large were the Twitter networks that were being formed, who was in them, and how far did they create new forms of interaction rather than replicating traditional forms of police/public communications in new contexts. This was before the 2011 riots changed the seriousness with which police leaders took social media, and the size of the samples and the number of interviews I could carry were limited, so any conclusions were tentative.

What I did conclude was that, while most networks were small, and the extent of two way communication was limited, there was scope for police forces to do more analysis of who their followers were in terms not only of their real world influence but also in terms of their influence within networks and look at strategies for building engagement with them. COMPOSITE has undertaken work on the use of Twitter during the London riots which is described as '...a first step into detailing how disparate adoption and usage patterns of Twitter emerge during crises' (Denef *et al.* 2013). This work also provides a first indication of the effects on image and relationship with the public.

### 3.3 SOCIAL MEDIA AND THE CULTURE OF POLICE ORGANISATIONS

The discussion of the work of the COSMOS programme already hints at the need to begin work on organisational issues which relate to the social aspects of technology adoption as well as the computer science issues. On the whole, this aspect of the study of social media in policing has yet to be systematically addressed although the range of issues for investigation is broad. (Bartlett *et al.* 2013).

There is of course a long tradition of studies of police occupational culture. There have been a number of studies framing issues of innovation, and resistance to it, in terms of knowledge and information. For example, Helen Gundhus (2013), in a study of change in knowledge management in the Norwegian Police Academy finds that new knowledge regimes are met with resistance, not only because the stubbornness of police occupational culture, but also because they threaten what is perceived as meaningful professional practices.

It is certainly a testable hypothesis, for example, that the introduction of social media analysis to





established processes for assessment of public tension could meet just such cultural resistance. Similar approaches to the study of organisational culture have been undertaken in relation to other professions. Journalism is an instructive case, not least because of the long established, symbiotic relationship between policing and the press, and evidence in some countries of unease about its suitability for a more transparent era. In their article 'Open source and journalism: toward new frameworks for imagining news innovation', Lewis and Usher (2013) identify the new phenomenon of the programmer journalist, a wholly new category from early models of the computer-aided reporter. These programmer-journalists aim to produce not stories but filters for information. They become curators of the world of user-created content, they manage public debate rather than looking for scoops. Their values are those of transparency, iteration, tinkering and participation, rather than exclusivity. In order to try to establish whether this challenge to the established world of news reporting actually exists, Lewis and Usher analysed a large sample of journalists' blogs to look for evidence of journalists deviating from their role as nonpartisan information providers by expressing personal opinions; sharing their gatekeeping role by including postings from others in their microblogs; providing a semblance of accountability and transparency to their professional work by offering their audiences links to external websites that background the information they provide.

The conclusions are disappointing for the innovator, if predictable. Lewis and Usher find that while journalists and technologists are working together to bring open-source tools into the newsroom, this hasn't challenged old processes of news work or old news values. New tools are used to help journalists do what they have always done. Newsrooms have been quick to impose social media ethical guidelines; instead of experimenting with how audience participation might change the journalism conversation, news institutions have tended to retrofit yet another reporting tool.

The alternatives are not easy though — annotative journalism; journalism as knowledge management, with journalists as curators of the collective knowledge. This is borne out by studies of how journalists use Twitter as well. Twitter alike show journalists reluctant to give up

their gatekeeping role and engage in 'ambient journalism' (Lasorsa *et al.* 2011).

Why is this of interest for policing? Because while there is a hypothesis that hierarchical, command and control police culture and organisation is at odds with the openness of the world of user-generated content, it is not clear what the resolution of this means in practice. As for the journalists investigated by Lewis and Usher, there has been extensive work in the creation of guidelines and codes of practice. There has also been disciplinary action on the basis of those codes against individual officers. But I don't think we have a systematic, as against an anecdotal, view of the ways in which social media, both as a source of information coming into forces or as a means of communicating outwards from them, has had an impact on power relationships and organisational structures. Is it, as in the journalism examples, a tool for doing established work better, or is it the basis of a wholly new way of working?

In the intelligence community, one of the responses to 9/11 was the publication of an article by Calvin Andrus (2005), from the CIO's office in the CIA 'The wiki and the blog: towards a complex adaptive intelligence community'. Andrus identified the need for bottom up approaches and compressed response times, and saw social media tools as the way to achieve that. These now include A-Space, Intellipedia and TAG|Connect but one could also suggest that the kind of networked analytical tools offered by i2 and Palantir import similar, if more structured, approaches. (Werbin 2011)

Police forces have begun to develop similar knowledge management systems — e.g. the Police Online Knowledge Area POLKA in the UK. The research challenge is to know how they are changing the way information is created, owned, used and conceptualised in forces.

#### 4. OPPORTUNITIES

The impact of social media on policing is still a relatively new phenomenon. For the research community, the time since police forces began to use social media is little more than a single cycle of grant application, data collection, analysis, peer review and publication ago. During that time, social media themselves have evolved in





the way and the extent to which they are used by the public and the police alike. It is no surprise that the research effort has been diffuse and heterogeneous up to now, and that it has yet to have a strong impact on practice. There are a number of observations which may have some bearing on the further evolution of this work.

Practitioners' reflections on their work will remain of great importance in sharing good practice. Nothing I say here is intended to detract from that. But there is scope for the academy to work together with police organisations to create additional level of analysis and insight. The kind of activity which I think would inform these include:

- Ethnographical studies of police social media behaviours (Skinner 2013);
- Similar studies of social media users which begin to understand the effect of police interventions. They might consider for example how enthusiastic are followers of police sites, and how impactful are police interventions?

- Structural approaches to police networks: who is in them? How do they change over time, and how do they work? In particular, how do they work in times of stress, such as a major incident or a controversial issue?

To do this effectively, there is a need for a more systematic approach to data collection. An observatory would benefit from the ability to formulate research questions and hence data requirements in advance of incidents. It would also be a means of creating reassurance that research ethics were being properly applied in a transparent matter to the collection and analysis of the data, and the publication of findings. It is particularly important for example to bear in mind the name to protect the interests of individuals even where the expectation of privacy is low e.g. if personal details might be revealed or unsubstantiated allegations be made about individuals. It is for consideration whether the COSMOS observatory offers sufficient access to bulk Twitter data to form the basis of this activity. It may in any case be necessary to establish more focussed data collection in order to create data to understand the evolution of social networks involving contact between the public and the police, using both online and survey sources.

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