AT TIMES OF CRISIS, TWITTER SHINES BRIGHTEST

In the aftermath of the Queensland floods in Australia, Dr Axel Bruns explores the role that Twitter played in disseminating information and considers how best to harness the capabilities of social networks in a crisis

By any measure, 2011 was a year marked by disasters. In Australia, it began with major flooding which saw vast portions of the state of Queensland, including Brisbane and surrounding areas, under water. A significant earthquake caused massive destruction and serious loss of life in Christchurch, New Zealand. And a 9.0 quake off the Sendai coast caused an unprecedented tsunami in Japan and led to the Fukushima meltdown. All this before the end of March; later months would see a range of human-made crises from the Arab Spring to the London riots.

Within minutes

Common to most of these events was the fact that social media such as Facebook and Twitter played important roles in reporting and responding to the crises, even while they were still unfolding. Within minutes of the first reports of trouble, social media streams providing first-hand information, images, and video footage emerged, and ad hoc publics[1] formed around spontaneously initiated Twitter hashtags such as #qldfloods, #eqnz, and #tsunami. It's a demonstration of what Alfred Hermida has called the 'ambient news'[2] function of social media: like ambient music, the social media newsfeeds are always there in the background, coming into focus when an unexpected turn of events catches our attention.

At times of crisis, Twitter, in particular, becomes an important component of the emergency media-sphere. Its internal structure is such that it facilitates the gathering of interested users more easily than Facebook – there's no need for users to formally follow each other; they can simply settle on and follow a shared hashtag (a keyword prefixed with the hash symbol '#') and see the tweets from anyone else who used that hashtag in their messages.

The speed of information dissemination which results from the simplicity of this many-to-many communication framework rivals and sometimes betters that of conventional, mainstream media: while they're still scrambling to get their reporters on the ground, chances are some (un)fortunate Twitter user is already on the scene, and tweeting.

Getting the message through

There is a danger of miscommunication and the (deliberate or accidental) spreading of rumours in all of this, of course. Even well-meaning Twitter users may pass on messages about the crisis which seem accurate at the time, but turn out to be unsubstantiated or plain wrong.

But even at the height of a crisis event, Twitter communication isn't a free-for-all, and the majority of Twitter users don't just suspend their better judgment. Our research into the use of Twitter during the Queensland floods[3], for example, clearly shows that in the end, key accounts of some authority – such as those of emergency services or key news sources – will still cut through.

In fact, it's the preferential retweeting activities of rank-and-file Twitter users which significantly boost those accounts' visibility, well beyond the network of followers which those accounts may have been able to attract by themselves. Especially at times of crisis, Twitter users engaged in working the story through their shared participation in the hashtag come to act as autonomous, self-organising communities. They actively police against disruptions and misinformation by calling out those who are seen as transgressing against the unspoken, emergent community standards.

During the Queensland floods, for example, users were quick to say a polite 'thanks, but no thanks' to an influx of (largely US-based) users whose 'Pray for Queensland' tweets were in danger of overwhelming messages containing critical situational information. And the lead users of the community can do their bit to help, of course. So, for example, the Queensland Police Service account @QPSMedia initiated its series of specially marked #Mythbuster tweets within the overall #qldfloods hashtag to meet the worst of the rumours head on. Those tweets turned out to be the most widely retweeted messages

sent by the @QPSMedia account during the entire flood crisis – the community saw the need, and stepped in to help.

Learning the lessons

There are important lessons from these experiences to be learnt by the media units of emergency services and other crisis stakeholders, such as news organisations. It's fair to say – and by no means a negative reflection on their performance – that the leading authorities engaging on Twitter during the 2011 'annus horribilis' were largely making things up as they went along, learning about the most effective uses of social media during crises along the way, and innovating as they did so. Where they failed, they did so honourably; where they succeeded, they laid a groundwork upon which they, and others, can now build in a more systematic fashion.

What is necessary now is to create a broader basis for the use of social media during times of crisis. More staff must become more familiar with these media; depending on the context this may mean creating a separate position to coordinate an organisation's social media activities, or embedding social media more thoroughly into the everyday activities of existing teams. More accounts must be created and made visible to the users who may need to rely on them when the time comes; this must anticipate end users' needs rather than suit the internal lines of communication within the emergency service.

For example, does it make sense to keep @QPSMedia separate from other emergency services accounts? Conversely, do we need separate, additional QPS accounts for different Queensland regions, or for different areas of policing? These questions are amongst many which still need to be considered – and user perspectives need to be sought, perhaps through what in essence is market research but also through an observation of what actual patterns of user engagement are in evidence across a range of crisis events.

Harnessing the network

But this can't just be about how emergency and other services can disseminate crisis information. The great, demonstrable strength of Twitter, after all, is that it is more than a mere broadcast medium – it enables everyday users to report from their own perspective, to provide updates on the local situation. How might we harness this vast network of citizen reporters more effectively? How can we tell passed-on rumours from first-hand information? What's the threshold at which a bunch of users on the outskirts of Bundaberg, tweeting about the smell of smoke, becomes a reason to send out a fire truck to investigate?

One thing is certain, the answer to those questions does not lie in educating users

to tweet in a certain way (to include location-specific hashtags, or follow some other, complicated syntax). Few users will go to that trouble, and even fewer will remember to do so in an actual crisis situation. We can hope that many Queensland users will remember the @QPSMedia account and will @mention it as they report important information from the scene, but even this will be useful mainly when they have already recognised the critical nature of that information.

What would be much more valuable would be an approach which could enable a frictionless crowd-sourcing process – the automatic detection, aggregation, and evaluation of tweets that may point to a genuine emergency, in a way which can pick up the weak signals (rising water levels, the smell of smoke, the sensation of a tremor) before they are recognised as a genuine crisis. Used this way, Twitter would become a fine-tuned human seismograph, except for more than earthquakes alone.

This may sound utopian, but it's far from impossible. Reports from the recent earthquake in the Victorian town of Moe weren't kidding when they noted that keywords related to the quake trended on Twitter before Melburnians actually felt the shake themselves; electronic shockwaves outran their seismic counterparts.

However, what's holding back the development of a Twitter-based crisis detector network is not so much the technology, but Twitter's increasingly restrictive policy of granting access to its data, even for researchers working in the public interest. It is technically possible for us to check the public message streams of Australia's estimated two million Twitter accounts for any weak signals of emerging crises, however, the cost of doing so is too great.

That's fine for the moment – first, we must develop the technology and test its reliability with a smaller sample of users, and my colleagues and I at the ARC Centre of Excellence for Creative Industries and Innovation Queensland University of Technology are doing so over the next few years, in the context of a project with the Queensland Department of Community Safety and public policy think-tank Eidos Institute. We'll report on our progress as we go, through our Website at http://mappingonlinepublics.net/.

But if this initial, limited crowd-sourcing approach manages to generate valuable information which is able to be operationalised by Queensland's emergency services, then we must find a way to scale up – by persuading Twitter to moderate its data monetisation stance, at least in the context of projects which demonstrably benefit the common good, or by attracting the funding required to pursue this approach at larger scale, for the longer term. Watch this space.

Endnotes

1   The Use of Twitter Hashtags in the Formation of Ad Hoc Publics – Axel Bruns and Jean Burgess, ARC Centre of Excellence for Creative Industries and Innovation, Queensland University of Technology

2   From TV to Twitter: How Ambient News Became Ambient Journalism – Alfred Hermida, M/C Journal, Vol. 13, No. 2 (2010)

3   Crisis Communication on Twitter in the 2011 South East Queensland Floods – Media Ecologies Project

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