Twitter has been important for emergency management in the UK local government, especially during the 2011 riots

In recent years the social networking site Twitter has played an increasingly prominent role in emergency management. In this post **Panos Panagiotopoulos** reports on his research into the use of Twitter by local government authorities. He argues that Twitter is enabling new forms of collaboration between authorities and citizens, increasingly of great importance in responding to unforeseen events.

When hurricane Sandy hit the east coast of the United States in late October, Twitter was used as a hub of timely information that could help people stay informed and safe. This is not the first time Twitter has become prominent in the context of unexpected events; another well-known example is the Japanese tsunami in 2011. Despite its limitation of 140 characters per message, Twitter's immediacy and rapid pace of update from desktop and mobile devices seems to be highly relevant for communication during emergencies.

In the UK, Twitter has about 10 million users with many of them accessing it from mobile devices. Media, celebrities, businesses, government and non-profit organisations use Twitter to promote their activities and engage in public conversations. Many local councils in the UK have also seized the opportunity and are using Twitter for a wide range of topics such as news, jobs and information about services. Certain councils such as Glasgow and Edinburgh now have over 15,000 followers.

With my colleagues Steven Sams and Ali Bigdeli, we have been researching the use of Twitter by local government authorities for the past year. We have been able to capture information through Twitter's application interface using the official list @Directgov/ukcouncils (now named @Govuk/ukcouncils) which lists the general Twitter accounts of 191 UK local government authorities. Most of these accounts were created in 2009 and are followed by about 2,000 users on average. In total, they have over 300,000 unique users, which gives access to a very large and diverse audience.

One of our main observations is that Twitter is a significant part of emergency prevention, response and recovery for many most of these local authorities. During unexpected events, councils are likely to tweet extensively and include hashtags such as #snow, #alert, #gritters, #police or #weather. Most of these emergencies are indeed related to bad weather with tweets informing as to the availability of services, issuing warnings, calling for information, justifying the use of available resources (e.g. gritters) and responding to questions. A noteworthy proportion of tweets related to emergencies are posted from mobile devices and during out-of-office hours.

An emergency situation where the role of Twitter has been exceptional is the riots of August 2011 that took place in major cities of England. The riots were marked by high uncertainty for their causes and effects, as well as a peak of activity on social media from public authorities, media and citizens who used them to make sense of the situation and intervene. On the other hand, messaging tools such as the encrypted BlackBerry Messenger supported the organisation of riots. The impact of Twitter during the riots was substantial, despite the difficulty to isolate its effects within a much broader flow of information involving digital and mainstream media. In general, the Twitter-sphere was overwhelmed by 2.5m tweets related to the events.

Our analysis of 1,746 posts by 81 different accounts in the period of 9-13 August 2011 shows that local authorities used Twitter to reduce the immediate effects of the riots and support community recovery. One third of their tweets were posted to promote official announcements, such as statements from councillors or the police. About 10% were aimed at disproving rumours and a 12% was related to legal actions against offenders. A further 13% was related to the clean-up activities that in many cases took place directly after the end of the riots. Another 17% of the tweets were devoted to some form of

community appraisal, especially for those helping to clean and streets. Also important is to note that an overall 25% of the tweets across categories were replies to other accounts, mainly local citizens.

Furthermore, it was also interesting to see that the level of Twitter activity was not always related to the extent of local disturbance. In areas where riots were extensive, Twitter was not used and vice versa. Certain authorities not affected by riots proactively used Twitter to warn about the readiness of police forces to intervene in the case of riots taking place. For example, the London Borough of Hillingdon account posted the most riot-related tweets (130) even though the area was not directly affected.

In our view, the increasing importance of Twitter in emergency communications is not that surprising given the medium's flexibility and conversational characteristics. What is particularly important is the ways in which Twitter seems to be enabling new forms of collaboration between authorities and citizens in the context of unexpected events and beyond. In the events of the riots, citizens were able to participate in actions initiated by authorities (e.g. identification of suspects) or organise their own actions with government support (e.g. cleaning up the streets).

These mutual forms of collective action provided citizens with a great diversity of options in how they could escalate their involvement in anti-riot actions; they could donate to affected local businesses, identify suspects, inform councils about their own understanding of the situation, disprove rumours, participate in clean-up actions and act as a source of information by promoting messages posted by others. Due to network effects, the impact of even small contributions such as retweeting a message can be radically multiplied.

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About the author

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