Big data brings new power to open-source intelligence

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The story of Eliot Higgins, a blogger who exploits publicly accessible material to piece together important facts about the Syrian conflict, offers a unique insight into the enormous potential of open-source intelligence. **Matthew Moran** *describes how the networked society has spawned new analytical approaches and opportunities.*

In November 2013, the *New Yorker* published a profile of Eliot Higgins – or Brown Moses as he is known to almost 17,000 Twitter followers. An unemployed finance and admin worker at the time, Higgins was held up as an example of what can happen when we take advantage of the enormous amount of information being spread across the internet every day. The New Yorker's eight-page spread described Higgins as "perhaps the foremost expert on the munitions used in the [Syrian] war", a remarkable description for someone with no formal training in munitions or intelligence.

Higgins does not speak Arabic and has never been to the Middle East. He operates from his home in Leicester and, until recently, conducted his online investigations as an unpaid hobby. Yet the description was well-founded. Since starting his blog in 2012, Higgins has uncovered evidence of the Syrian army's use of cluster bombs and exposed the transfer of weapons from Iran to Syria. And he has done it armed with nothing more than a laptop and an eye for detail.

This type of work is a form of open-source intelligence. Higgins exploits publicly accessible material such as online photos, video and social media updates to piece together information about the Syrian conflict. His analyses have formed the basis of reports in *The Guardian* and a blog for *The New York Times*, while his research has been cited by Human Rights Watch.

The combination of his keen interest in blogging and a burning desire to sort fact from fiction in the Syrian war has propelled this one-man intelligence unit from blogosphere obscurity to international recognition as a conflict analyst. The rise of his particular brand of social media forensics is portrayed as a triumph of enquiry – and rightly so. Higgins has successfully navigated a maze of rumours and misinformation and revealed much about the true nature of the Syrian conflict.

On a larger scale, the story of Brown Moses offers a unique insight into the enormous potential of open-source intelligence. His work shows how the information posted online for all kinds of reasons can become a powerful tool in the right hands.

Big data breakthrough

Two overlapping developments in particular have greatly influenced the growth of open-source intelligence. First, the explosion of social media has given us instant access to a wealth of user-generated content. From Facebook to Twitter to Google+, we are now only ever a few keystrokes away from a potentially global audience. And as these tools increase global connectivity, people seem increasingly willing to project their thoughts, opinions and observations into cyberspace. The process of information generation has produced what has been described as "new digital commons of enormous size and wealth".

Second, and on a larger scale, the scope of open-source intelligence has been completely changed by the rise of big data. The meaning of this term is contested but it is commonly used to describe "data that exceeds the processing capacity of conventional database systems". According to some estimates, some 1,200 exabytes of data now exists in the world and 90% of it was created in the last two years alone. Social media is a good example of big data in practice. Users are generating 500m tweets and 90m blog posts on Tumblr per day. Every minute, 100 hours of video are uploaded to YouTube. The social media universe is expanding at an astronomical rate.

Little surprise, then, that this networked society has spawned new analytical approaches and opportunities. From everyday policing to counter-terrorism to civil war, information gleaned from open sources can provide insights into world events like never before. Finding what you want in this sea of information can be like looking for a needle in a haystack – but it can be done.

Eliot Higgins pieced together his analysis of weapons use in Syria by trawling through hours of video footage uploaded to YouTube, refining and cross-referencing what he found with information drawn from other websites and platforms.

But the Brown Moses approach represents just one end of a spectrum. At the other end, at the cutting edge of informatics and computing, researchers are developing complex algorithms aimed at automating the process. This will enable them to make big data work as a source of intelligence too. In between are those who combine the manual searches with freely available and often very useful analytical tools.

A recent report by Demos hinted at the potential for social media analysis to support police investigations, for example. Tweets and status updates can provide eyewitness testimony and pictorial evidence of incidents or be used by police to "measure groundswells of emotion". Left unchecked, bubbling tensions could develop into episodes of collective violence. Monitoring them online could enable a faster response, or even preventative measures.

This is not open-source intelligence as it has traditionally been understood. The move towards automated analysis hints at something more akin to signals intelligence. It is perhaps for this reason that researchers active in the area of social media analysis have coined their own term: social media intelligence or SOCMINT. Fundamentally, however, this is open-source intelligence in the sense that publicly accessible information is being exploited for intelligence purposes.

Technology has breathed new life into open-source intelligence. Whether it is derived from the work of internet investigators like Brown Moses or complex algorithms, it is more valuable than ever before.

Note: This article was originally published on The Conversation. Read the original article here. The article gives the views of the author, and not the position of the British Politics and Policy blog, nor of the London School of Economics. Please read our comments policy before posting.

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