Verifying News on the Social Web:
Challenges and Prospects

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ABSTRACT

The problem of verification is the key issue for journalists who use social media. This paper argues for the importance of a user-centered approach in finding solutions to this problem. Because journalists have different needs for different types of stories, there is no one magic bullet that can verify social media. Any tool will need to have a multi-faceted approach to the problem, and will have to be adjustable to suit the particular needs of individual journalists and news organizations.

Categories & Subject Descriptors

A.m Miscellaneous

Keywords

Breaking news, Journalists, Social Media, Verification

1. INTRODUCTION

As social media has become an important source of news for journalists, there are increasing concerns about the reliability of news in networks like Twitter and Facebook. How can journalists quickly identify misinformation, faked pictures and the setting of false trails? The time-consuming and problematic nature of bespoke verification has reduced the ability of journalists to make full use of social media. This paper argues that without tackling the thorny problem of verification the use of social media as a source of news will be problematic. It argues that a multi- faceted approach to measuring trust and reliability is essential in developing any new tool. Furthermore, any tool must be capable of adjustment to iterate the perceived standards of journalists (which may vary in different news organisations) to verification which takes into account the context of a news story in addition to more traditional metrics. The approach is user-centred, based on the perceived needs of professional journalists working in a real-time environment identified through qualitative research.

2. TACKLING NEWS VERIFICATION

2.1 Journalists and social media

Over the last few years, social media has become a primary news source for journalists and ordinary news readers alike. Social networks are often the place where news is broken first and increasingly politicians, sports and entertainment stars use their personal social channels to reach out to personal followers but also to make announcements that they know will then be picked up by the media. As the size of social networks has grown, these channels have been increasingly used for distributing primary eyewitness material. Some of the most compelling reports from the Japanese earthquake (2011) and subsequent nuclear disaster came from those close to the scene with Internet access. Twitter, Facebook and You Tube were also used extensively during the Arab Spring to alert the rest of the world about what was happening in countries like Tunisia, Egypt, Libya and now Syria.

In the process these sources have become indispensible for the modern professional journalist. Most news organisations expect journalists to be fluent in social media as a way of discovering and distributing news and many expect them to hold conversations with audiences as part of the ongoing production process, as leaders of major news organizations told us during our research. The New York Times told us that *"social media is transforming the way we do journalism"*, while BBC Sport said *"if you are in a news editorial job at the BBC you have to use Twitter. We say you have to have an account to follow - not necessarily to tweet*. MSN said that *has changed the way we do news. It is also now the key to how we package news and get it out to our audience, including video."*

2.2 Problems of Verification

The rise of social media has not been without its critics. Some point to the unreliability of information in social networks and complain that the quality of information is being undermined by a growing 'cult of the amateur' and that rumours and falsehoods can be instantly spread around the world (Keen, 2007). These issues have become pressing as mainstream media outlets integrate more and more social media content into their output and ordinary people increasingly use social media as a source of news. A recent survey of online news users in nine countries in 2012 shows that on average 25% of news viewers used social

media as a regular way of finding news. It also shows that less that 10% trust the information they find in networks like Twitter and Facebook (UK figures only) (Reuters, 2012).

Over the years there have been a number of well documented cases where misleading pictures and stories in social media have been given the 'oxygen of publicity' by news companies desperate to get one step ahead on a major news story. In the Connecticut school shootings (Dec 2012) News agency and TV outlets misidentified the gunman to millions of readers and viewers based on information in social media (Zurawick, 2012). Following the death of Osama bin laden in May, 20 doctored 'photoshopped' pictures purporting to show his dead body were distributed on social media and picked up by newspapers, news websites and TV stations potentially inflaming passions in the region (Newman 2011). The fabrication of pictures is a particularly difficult issue and is sometimes perpetrated by governments or other official sources who then release via social media, on their own websites and direct to news agencies. In 2008 AFP withdrew a picture of an Iranian missile test where details had been changed to make the test look more impressive (Oliver, 2008).

2.3 Pressures on journalists

None of these issues are entirely new but they are becoming more complex in a world when the volume and speed of information is growing exponentially. Social media has raised a number of issues about how eyewitness material can be used and credited – but also about what kind of checks should be made to ensure veracity.

Most news organizations have published guidelines for how to manage these issues and some have specific roles such as social media editor or a group of people who are expert in managing this material such as the BBC's UGC hub (Turner, 2012) and CNNiReport (Silverman, 2012). These hubs and processes are intended to enable journalists to quickly identify misinformation, faked pictures and the setting of false trails? But few organisations have the level of resource that the BBC and CNN can throw at this problem. The time-consuming and problematic nature of bespoke verification has reduced the ability of journalists to make full use of social media.

Our own research suggests that journalists are also feeling overwhelmed by the tide of information now coming at them every day. In early 2012 we carried out a series of structured interviews with journalists[1] from some of the world's top news organisations trying to understand their processes and their needs

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[1] We interviewed 22 journalists over a period of four months with a series of in-depth interviews based on a common set of questions. The organisations included BBC, CNN and New York Times, AFP and Deutsche Welle). We also interviewed a small number of journalists who are less experienced with social media – to get a wider perspective on how journalism is practiced today.

in respect of verification and wider social media use. They told us of their excitement about social media, but also about some of their concerns, particularly in relation to the need for filtering out unrepresentative content and the desire for more transparent algorithms. They had a clear idea of the kinds of tools they wanted. *"If we could filter out the rubbish and just show things that were relevant to us that would be great – in language that made sense,"* said one survey participant. Another comment was: *"I wish Google and twitter would be more transparent about their algorithms –so it would be great to be transparent about who things were trending or why things popped up".* They also worried about how representative social media comments were: *"Often social media conversations are not representative – we are often cautious about taking it to be the voice of everybody."*

2.4 Newsroom practices

Drawing on our interviews and previous published research we can paint a fuller picture of the way in which professional journalists are using social media today and where they see the gaps in provision around verification.

During breaking news events staff will search Twitter and other networks for appropriate keywords, navigate by hashtag or filter by geography. Journalists will attempt to verify content by contacting the eyewitness using Twitter messaging or email. In some cases, they may use specialist tools to check that pictures have not been manipulated or previously published on the Internet.

With the Norway bombings in July 2011, the CNN social media producer found an eyewitness who had uploaded a video to YouTube within a few minutes of the story breaking. They contacted him, vetted him and identified his Twitter location as part of the confirmation process. They then were able to use him on air speaking English and later speaking Spanish.

Verification is a critical issue here and news agency AFP deploys a number of software tools to assist journalists make quick judgments about whether to publish a picture than has been sourced from social media. Following the death of Osama bin Laden, AFP used recognition software called ExoMakina to reveal the picture was a photomontage fake, enabling it to alert its subscribers.

Following the Costa Concordia disaster in 2011, the BBC social media team tried out different search terms on Twitter and looked for images from Twitpic and yfrog – also YouTube for video. They tried to anticipate words people might use such as 'sinking' and 'rocks'. They use geolocation services to drill down to people who are nearby few posts are currently geo-tagged and tools often do not have enough fine grained control.

Journalists will frequently monitor social media and incorporate comments in news stories – as quotes. The Huffington Post has now institutionalised this approach in a large number of news stories with what it calls a Twitter slide show and it also links to specific accounts. This practice has been growing and is

especially prevalent in entertainment and sports news journalism. Twitter now verifies official accounts such as Justin Beiber to make it easier to know that the content is authentic.

However, official accounts can be hacked and beneath the top level there is no verification for specialist journalists or authorities on a wider range of subjects. In many cases we found journalists were using workarounds in existing tools and that technology could help. Very clearly, they told us that they did not want a tool that decided for them – but one that made it easier for them to exercise their own judgment.

2.5 The Social Sensor Approach

For professional news journalists and general news users the key challenges around social media are the same; how to make sense of a huge amount of information and to identify relevant and important news quickly and with context. This is the mission of the Social Sensor project and the focus of our research.

Two key parts of the project relate to

1. Identifying key influencers and opinion formers around any event in real time and providing contextual information so journalists can make their own judgements
2. Creating a simple way to verify or authenticate user generated content (text, images, video and audio) from social media sources

Although there are many tools available that allow the social web to be filtered and navigated, they do not generally focus on the specific needs of news and these specific issues of verification. For example, tools like Klout or Peer index come up with aggregate scores for a contributor but these were not considered by our interviewees sufficiently granular to help journalists make judgements on authenticity in a fast moving news story Alethia' is the Greek word for 'truth' and in Social Sensor, in conjunction with our colleagues at the Athens Technology Centre and Deutsche Welle, we are developing an 'Alethiometer': a module attempting to meter the credibility of information coming from any social source by examining the three Cs - Contributors, Content and Context. These seek to measure three key dimensions of credibility: the reliability of contributors, the nature of the content, and the context in which the information is presented. This reflects the range of considerations that working journalists take into account when trying to verify social media content. Each of these will be measured by multiple metrics. The results from the above steps can be weighted and combined together to provide a sense of credibility to guide journalists.

Our user research indicates that verification or guides to credibility are of crucial importance to journalists under severe time pressure. Further checks will often be necessary but an indication of credible content or 'flag' to highlight problematic content (as a way of preventing hoaxes) is likely to be of significant value.

We provide an initial set of five metrics for every one of the three categories, which are being investigated for inclusion in the prototypes. Together with the metrics we provide an initial quantisation scheme for assigning credits to each metric. For every metric we intend to normalise the results on a 5-scale grading scheme: A negative result in any metric will raise a *suspicious flag* to be shown to the user in the higher level of the verification User Interface. When the user clicks on a flag, the system will lead to the corresponding metric screen which raised the particular flag. These additional screens will give more detail and context about Contributor, the Content and the Context.

Over time we will be able to build up information based on publicly available information from multiple sources that will help journalist understand the context of a tweet or picture. For example, showing the geographic location of the followers of a contributor can give clues about their likely location which may affect their credibility on a particular story. A key next step will be to test the concept of the Alethiometer with working journalists using an end to end system. The evaluation is done through a variety of metrics, including internal and external rankings and comparison with other data sources. The approach is user-centred, based on the perceived needs of professional journalists working in a real-time environment identified through qualitative research.

3. CONCLUSIONS

The problem of verification has challenged media organizations and software designers alike. The Social Sensor project, by relying on the needs and practices of working journalists, and using a user-centric and iterative process of prototype development, aims to make a significant contribution to this problem by developing innovative and flexible tools and usable heuristic metrics.

4. ACKNOWLEDGMENTS

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