

# Who Are More Active and Influential on Twitter?

## An Investigation of the Ukraine's Conflict Episode

Hassan Aldarbesti, Qatar Foundation Social, Doha, Qatar

Huijing Deng, Credit Suisse Group AG, Switzerland

Juliana Sutanto, Lancaster University Management School, Lancaster, UK

Chee Wei, David, and Phang, University of Nottingham Ningbo Campus, Ningbo, China

### ABSTRACT

Twitter is an emerging form of news media with a wide spectrum of participants involving in news dissemination. Owing to their open and interactive nature, individuals, non-media, and non-commercial participants may play a greater role on this platform; thus, it is deemed to disrupt conventional media structures and introduce new ways of information flow. While this may be true in certain aspects in news dissemination such as allowing a broader range of participants, the authors' analysis of the involvement and influence of the different participant types, based on a large tweets dataset collected during the Ukraine's conflict event (2013-2014), portrays a different picture. Specifically, the results unveil that while non-commercial participants were the most "involved" in generating tweets about the news event, the retweets they attracted, a common measure of influence, were among the lowest. In contrast, mass media and sources related to journalists, professional associations and commercial organizations garnered the highest retweets.

### KEYWORDS

Celebrities, Mass Media, Non-Commercial Participants, Retweets, Twitter

### 1. INTRODUCTION

Social media technologies have been touted to bring about unprecedented changes to how people produce and obtain information such as news. Owing to their open and interactive nature, people are able to actively create and share information with each other, rather than just being a passive information receiver. Indeed, they are deemed to be user-centric and able to facilitate communal activities, implying that users and their interactions are at the core of these technologies (van Dijck, 2013).

Being a typical form of social media technologies, Twitter has drawn substantial attention from both researchers and practitioners in recent years (e.g., Cha et al., 2010; Bakshy, et al., 2011; Hermida, 2010, 2014; Kwak, et al., 2010; Mocanu et al., 2013). Twitter allows users to send short messages of less than 140 characters, or "micro-blogs," in an instantaneous manner to other users. It

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has described itself as “a real-time information network that connects you to the latest information about what you find interesting”. Prior research notes that the technology enables users to “obtain immediate access to information held by all or at least most, and in which each person can instantly add to that knowledge” (Sunstein, 2006). Noting this characteristic, the extant research has argued that the technology (and social media alike) may enable new relational structures that disrupt the existing authoritative structures and established ways of information flow, one pertinent area being news dissemination (Hermida et al., 2012; Boyd and Marwick, 2011).

Twitter is used extensively by individuals to read and share news with each other. For instance, it has emerged as a major platform to help report, organize and disseminate news information during major events such as the US presidential elections in 2008 (Lenhart and Fox, 2009) and the Euromaidan revolution in 2013 (Ronzhyn, 2014). Indeed, Smith and Rainie (2010) found that news sharing on Twitter is very common, with 55 percent of users posting links to news stories. A study by An et al. (2011) also found that news messages was forwarded 15.5 times on average, thereby substantially increasing the reach of their audience. Yet, at the same time, Twitter fosters the dissemination of short fragments of information from a diversity of news sources, both official and unofficial ones (Goodrum et al., 2010; Hermida, 2010). This is deemed to have challenged the conventional ways of news dissemination that are mainly controlled by official, authoritative news sources (e.g., CNN, New York Times), and undermined the gatekeeping function of journalists in determining the what and when of news content dissemination (Hermida, 2010).

Along the same vein, it has been argued that given the interactive nature of social media such as Twitter, conventional mass media may lose out in competing for news audience (Dimmick et al., 2011; Lee and Ma, 2012). This has led to the view that “news media business managers and journalists face increasing uncertainty of what the future holds, and the institutions of journalism find themselves in crisis.” (Adcock, 2016, p. 2) In response, conventional mass media have attempted to involve by establishing their presence on Twitter and disseminating news on the platform themselves (Lasorsa et al., 2011). On the flip side, it is worth noting that the open nature of Twitter makes it prone to disseminating rumors or fake news, and ordinary users play a big part in this dissemination (Vosoughi et al., 2018). This may potentially discount the role and importance of news dissemination on Twitter, especially when non-mass media users are concerned.

In view of the mixed perspectives above, this study aims to conduct a comprehensive investigation on news dissemination on Twitter, in particular with respect to how different participants, including mass media and non-mass media/ordinary users, involve in the dissemination as well as their influence generated. Our formal research questions are: What types of participants are more active in disseminating news on Twitter? What are the relative influences they generate in the news dissemination? We seek answers to these research questions via two means: 1) examining both tweet and retweeting<sup>1</sup> behaviors of users, which respectively correspond to levels of their involvement and their influence generated (Cha et al. 2010); 2) based on a combination of machine analysis and human coding, identifying a comprehensive list of participants on Twitter including mass media (further differentiated into major news agencies, radio and TV stations, news aggregators, other news agencies), journalists (further differentiated into those affiliated to media and the independent journalists), bloggers (further differentiated into blogging associations and independent bloggers), organizations (further differentiated into commercial and non-commercial), and celebrities. These considerations allow us to obtain a clearer understanding on the involvement and influence of the different participants in news dissemination on Twitter.

In the followings, we first present a review of the relevant literature on Twitter and news dissemination.

## **2. LITERATURE REVIEW**

A number of prior studies have investigated how Twitter is used for news dissemination. An early seminal study that notes such a usage of Twitter was Kwak et al. (2010); they showed that Twitter

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