

## **Where has the news gone? A network approach to secondary gatekeeping on Twitter in The Netherlands and Belgium**

Gatekeeping has been identified as a largely top-down process, with elites such as government actors, PR sources, experts and journalists filtering the information that is incorporated in the news output and then distributed to mass audiences (Shoemaker & Reese, 2001). However in the past ten years, scholars have welcomed the arrival of social media as a potential catalyst for increased user involvement. Whereas it has become clear that the integration of user contributions in the news production process remains fairly limited (e.g. Authors), other studies suggest that users may play a bigger role in the re-distribution and dissemination of mass media content in their networks on social media platforms (Singer, 2014). In other words, elite sources and media outlets maintain their role as primary gatekeepers in the networked society, while social media allow users to act as secondary gatekeepers by giving visibility to certain media content that they share within their network.

Until now, however, little is known about the processes underlying the secondary gatekeeping process of news content on social media platforms. Therefore the aim of this paper is to investigate the re-distribution of tweets originating from eight online news outlets (De Morgen, Het Laatste Nieuws, Het Nieuwsblad, Newsmonkey, Apache, De Correspondent, Algemeen Dagblad and NRC Handelsblad). Our research questions are twofold. First, as the spread of a news outlet's tweet depends on its followers' followers we ask how structural characteristics such as the extent to which there are information brokers in the network or the importance of the individual followers play a role in the dissemination of tweets. Second, we examine the identity of individual users that take significant positions in the network, more specifically distinguishing elite and audience sources in the secondary gatekeeping process.

In terms of analyses, retweets (N=418) of messages originating from the eight news outlets were collected in the beginning of November 2015 through the Twitter REST API. The maximum amount of tweets that could be collected per news outlet through this API was 3200. To minimize the influence of content-related characteristics, only tweets that were retweeted between 10 and 100 times were withheld. Subsequently, data on retweeters' connections were collected in order to construct retweeter networks. In total, these 418 networks contained 7728 retweeters.

In order to understand the structural characteristics of retweeter networks and to determine their role in explaining the variation in retweets we started by performing a Poisson regression with network parameters and news outlets as independent variables and the number of retweets as dependent variable (Agresti, 2011). To obtain p-values that are corrected for network processes, 418 random networks were generated with the same size and density of the retweeter networks. Subsequently, a Poisson regression with the same predictors was performed. By repeating this process 10.000 times a distribution of parameter estimates was built. This allowed us to identify significant predictors (Good, 2013). Next to gaining insight into what kind of structural properties are indicative for networks of retweets, the significant structural parameters were used to investigate users that occupy relevant positions. This allowed us to identify what kinds of different types of users were involved in secondary gatekeeping practices.

With regard to our first research question, larger networks in terms of retweets tended to exhibit a centralized structure (degree centralization) combined with nodes that were closely connected with each other (closeness centralization). This shows that popular tweets are characterized by the presence of a number of central and densely connected actors and not by a wide-spread visibility of tweets. With respect to our second research question, the findings indicated that traditional elite sources can be found among those significant users in larger networks. This suggests that online value creation of journalist-produced content is not only in the hands of the audience but remains for a significant part dependent on traditional elite sources. This raises questions regarding the audience in relation to secondary gatekeeping practices and the usage of popularity measures as retweets to gauge the spread of content on the platform.

In addition to its contribution to the body of literature on network journalism and secondary gatekeeping, this study contributes to the methodological development of journalism studies. Considering the new, digital media ecology, we believe that the use of digital data collection techniques and social network analysis can yield valuable insights in the ways in which journalism is changing.

## References

### Authors

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