Comparison between the Twitter Search Network and Facebook Like/Comment Network for two Movies: The Hobbit and The Interview

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Abstract. We are hereby analysing four different networks, from two social media portals, Twitter and Facebook. The networks are related to the movies The Hobbit and The Interview. The movie The Hobbit first appeared on the 12/01/2014 in the UK and in the month that followed in the rest of the world. The movie The Interview is quite controversial and has faced many issues before being released solely in the US, first on the 12/11/2014 and then during Christmas time. We have run our analysis on data collected around the release dates. The Twitter networks we are analysing are directed, with edges linking users that have authored a post to users that have retweeted it. The Facebook networks are being analysed in three consecutive steps, marking important release dates around the world of the two movies; these are unimodal, undirected networks, with edges linking users that have liked or commented on the same post made by the official Facebook pages of the two movies. The analysis reveals a few important things about the four networks: the two Twitter networks differ a lot between them - although big, The Interview's Twitter graph is a "young" one, meaning that authorities and hubs haven't yet been formed properly, the posts are sparse and with very few users retweeting more than one post. In comparison, The Hobbit's Twitter graph has well defined authorities and most of its users have retweeted more than one popular tweet. The Facebook networks also differ: The Hobbit has more users liking and commenting on their posts, especially around the US release, while The Interview network is smaller and doesn't change much in time.

1 Collecting the data

In order to collect the necessary data for our study, we first tried to use popular data retrieving tools, such as Wolfram Mathematica, NameGenWeb or Social Network Importer for Node XL, but due to some Twitter rate limitations or malfunctioning of the tools, we resumed to writing small python scripts with the use of the Bear Python-Twitter API, an open-source library that provides a "pure Python interface for the Twitter API" and Node XL 1.9.2 for the Facebook queries.