

#Egypt: Visualizing Islamist vs. Secular Tension on Twitter

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Abstract—We present a demo that shows Twitter hashtag usage in Egypt from the angle of Islamist vs. secular polarization. The demo not only provides insights about current events in Egypt, but also reveals differences in attitudes of the two political camps with respect to major events abroad. The demo is publicly accessible at <http://sc1.qcri.org/twitter/egypt/weekly/>.

I. INTRODUCTION

Since the Arab Spring started in December 2010, a lot of attention has been paid to the role that social media played during the various uprisings and demonstrations [1]. More generally, people have turned to social media to understand politics in the Arab World from a grassroots perspective. Our demo contributes to this line of work as it gives insights into how supporters of the two main political camps in Egypt, the Islamists in power and the Secular opposition, use Twitter. Patterns in their Twitter hashtag usage have in recent work been shown to relate to tension in society [2]. Our work also extends existing work on Polarization on Twitter in general [3], and it takes a similar angle to work on “mapping” Islamism in Egypt [4].

The demo is publicly accessible at <http://sc1.qcri.org/twitter/egypt/weekly/>. The features it offers and how it works will be described in the following.

II. FEATURES OF THE DEMO

A. Polarity and Trending Information

The main purpose of the demo is to show hashtags used in Egypt and to determine their “polarity”. Polarity here refers to the tension between Egyptian Islamists and Secularists and the demo shows which hashtags are predominantly used by either side during a particular week. A hashtag such as *#colorado_free_alturki* which refers to the demand about freeing a Saudi national arrested in Colorado and is mostly used by the Islamists is, e.g., assigned a strong 0.94 leaning. To separate hashtags such as *#egypt* that are frequently used all the time from *#occupyistanbul*, which relates to a particular event, the demo lets the user sort the hashtags according to a volume-based trending score. By default, hashtags with the highest trending score and a strong connection to the week under investigation are ranked first.

B. Historic Information

The demo allows the user to “go back in time” and see hashtags prominently used by either camp in the past. To

navigate to a particular week users can use the previous/next week buttons on the side but they can also use the plot of hashtag-derived tension on top of the demo to navigate to a particular week of interest. Tension was, e.g., high at the beginning of December 2012 in relation to the constitutional crisis and users can jump to this period in time.

C. Putting Things into Context

Without a certain knowledge about Egyptian politics it is hard to understand the results shown by our demo. To facilitate the understanding as much as possible, our demo gives various options to explore the results in context. Clicking on the hashtag will trigger a search on *topsy.com* for the respective hashtag and will show matching tweets for the week of interest. Additionally, the demo provides the option to issue the hashtag as a query to Google News, searching only over the time period of interest.

III. HOW IT WORKS

Most of the details on how things are computed are presented in [2]. Here, we only summarize the main ideas to have a self-contained presentation.

The starting point for our demo is a list of 22 politically active Twitter users that were manually assigned to either “Islamists” (10, including MuhammadMorsi) or “Secularists” (12, including ElBaradei). For these users all public tweets¹ were downloaded through the Twitter API. For each tweet up to 100 retweeters were obtained. For all retweeters their Twitter bios were downloaded. This gives us a set of 20,806 users. For these users, no longer including the original 22 seed users, we obtained all their public tweets. According to which seed users the user retweeted more they were fractionally assigned to either the Islamist or Secularist camp. For example, a user with one retweet for an Islamist seed user and four retweets for Secularist seed users would be labeled as 80% Secularist.

In the next phase the hashtags used in a given week were analyzed. A hashtag predominantly used by, say, Secularist users would be assigned a Secularist polarity. The exact details involve a volume normalization (as we have more retweeters for the Secularist camp) and a smoothing procedure (to avoid assigning extreme polarity to low volume hashtags). Additionally, for each (hashtag, week) pair a volume-based trending

¹Technically, “only” the most recent 3,200 tweets per user, a limit imposed by Twitter.

