PROFILING TWITTER ACTIVISTS: THE PROTESTS AGAINST THE REPUBLIC OF CROATIA'S GOVERNMENT

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ABSTRACT *Twitter s a social network and a microblogging service. Examples from Iran, Tunisia and Egypt have shown the possibilities of using Twitter as a platform for activism. This research looks at the manner in which Croatian activists use this tool and how such users and uses are distinct from average users. This paper establishes that activist users differ vastly from average Twitter users. Activist users have a significantly higher number of friends and followers. An increase in the number of friends leads to an increase in the number of followers (and vice versa). In addition, activist users publish a large number of posts regardless of their follower number, even though that number is significantly higher than that of friends. Activist users forward interesting information more often, while they disregard Twitter as a tool for conversation or coordination. Still, activist users and average users are similar in regard to the poster's profile and posting quantity. Both categories of users follow the power-law distribution.*

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INTRODUCTION

Resource mobilization theory (RMT) explains that mobilization resources such as money, time and skills are critical for the success of social movements (Eltantawy and Wiest, 2011). Although the original theory failed to explain why and how activists with limited resources can succeed in bringing social change, with the examples of the "Arab Spring," and protests in Moldova, Iran and Croatia we see that free and easy internet social media tools like Facebook, Twitter and SMS can have an instrumental role in antigovernment protests, and in some cases it can even lead to the resignation of a country's dictatorial leader or corrupt government.

This is perhaps best understood in the context of the recent events in Egypt, as Eltantawy and Wiest explain:

The Egyptian revolution demonstrates the opportunities offered by social media for large-scale mobilization and the organization and implementation of social movements. Additionally, the use of social media help to draw local and international attention to important activities that otherwise may be shielded from public view, thereby isolating the participants. Social media introduced speed and interactivity that were not possible through the reliance on traditional mobilization resources such as brochures, faxes, and telephones. (2011: 1218)

Zeynep Tufekci and Christopher Wilson claim that "the connectivity infrastructure should be analyzed as a complex ecology rather than in terms of any specific platform or device" (2012: 365); however, by analyzing a single tool we can learn a lot about how social media facilitate campaigns, grow social networks, transform these network and set an agenda (Bennett, 2003).

Since its establishment in 2006, Twitter has quickly proven itself to be a successful platform for activist operations. Twitter's advantage over other online social media is the brevity of posts which can be sent quickly using mobile phones, and the ease of following the posts by other users for the same reasons (Head, 2010: 93). Twitter has been used during antigovernment protests in Moldova, Iran (Van der Zee, 2009), Tunisia, Egypt (Ungerleider, 2011; Kavanaugh et. al., 2011) and Croatia (Brautović, 2011), among others. These examples show that activists are able to use Twitter for recruitment, spreading information, focusing their activities and attracting media attention (Posteorus, 2010).

Twitter is an Internet social network and a microblogging service that enables users to open profiles, have friends and followers and publish short posts (tweets) up to 140 characters in length. Twitter today is used by more than 277 million registered users (Lee, 2011). In opposition to Facebook, communication on Twitter is open to all Internet users (except for the messaging between the users). New posts are published chronologically, and users are able to browse posts made by the people whose accounts they subscribe to, or they can reach them by searching for key words, i.e. thematically. Subscribing to someone's profile does not necessarily imply a mutual relationship, meaning that the user does not need to befriend another user, even though that person can be a friend. In order

to facilitate searches for thematic posts, users can use hash-tags, adding keywords to each post. A hash-tag consists of a key word best describing the topic and the prefix #.

Akshay A. Java et al. (2007) identifies several types of twitter users:
>Information sources (publish news and have a large number of followers),
>Friends (a wide category including family, coworkers and strangers),
>Information seekers (publishing rarely, but often following others).

Similarly, by analyzing two thousand Twitter messages, Pearanalytics (2009) determined that 44.55 % of the messages consist of pointless babble, 37.55 % are conversations, 8.7 % pass along value, while self promotion is present in 5.85 % of the content. When using Twitter one has to be aware that it's a very "noisy" environment due to the large number of posts and posting frequency, as well as the method of introducing information into the system (Honeycutt and Herring, 2009:2).

Activists use hash-tags in order to organize and rally around a certain campaign or event (Cullum, 2010). From these examples we can see that Twitter has become a major hub of political activity while making political action easier, faster and more universal (Eaton, 2012).

TWITTER AND CROATIAN PROTESTERS

Antigovernment demonstrations in Croatia started in February and lasted until April 9, 2011. The public was dissatisfied with government corruption and the current economic crisis. The Croatian Government was led by Prime Minister Jadranka Kosor, who two years earlier replaced elected Prime Minister Ivo Sanader. The former Prime minister left the government, never explaining why.

The initiative for launching the demonstrations started on the Facebook fan page, Great protest for the overthrow of the Government (http://www.facebook.com/prosvjed). Protests were held throughout Croatia. However, the largest events were in the capital city, Zagreb. The protests gathered a large number of various political organizations from both the extreme left and right, non-governmental organizations and citizens with a single joint goal of overthrowing the government (Čadež, 2011). The Zagreb protests were held in two-day cycles reaching their zenith on March 4, with over 10 thousand protesters participating (Trajković et al. 2011). Besides Facebook, protesters actively used Twitter. Given of all the advantages provided by Twitter, its usage by Croatian activists will be the topic of this article's research.

The research is guided by the following research questions:
>How do activist users on Twitter differ from average Twitter users in regard to the time of each profile's creation, the disclosure of personal data, the number of friends following and the number of friends being followed?

>How do routines of posting tweets differ between activist and average users? What are the differences?

These questions are investigated by using an array of data collected from primary (activist users) and secondary sources (average users). The results are presented in this article. For this paper, I define an activist user as a user of social media who engages in activism using tools like Twitter, Facebook and YouTube. Activist users label themselves as activists by posting on the topic of the protests and by using specific hashtags (#prosvjed; #politikahr, #hrvatska).

RESEARCH METHODS

Data collection for the research included two types of primary source data:
>Data on activist Twitter users (profiles)
>Data on activist Twitter posts

For the first point, user data was collected on March 9, 2011, and encompasses 347 of the total 772 protesters using Twitter to publish protest-themed posts in the period between March 2 and April 2, 2011, or 45.3% of the total population publishing protest-themed posts. Data was collected using NodeXL add-on for Microsoft Excel, identifying Twitter users posting with the hash-tag #prosvjed (#protest).

The second type of data was collected between March 2 and April 2, 2011. 9,967 messages containing the hash-tag #prosvjed were collected. For the tweet collection, Archivist software was used.

In this article, users followed by another Twitter user are called friends, and users following another user are called followers.

RESULTS AND DISCUSSION

Activists started opening Twitter profiles immediately after that internet service was activated in 2006 (Wikipedia, 2011). The first Twitter profile (Graph 1) used by activists was created in August 2006; however, the greatest number of new Twitter profiles were created in the first months of 2009, matching the trend among average Twitter users (Van Grove, 2010). As many as 67.7% of activists started using Twitter in the period between January 2009 and August 2010, which is 20% more than the 44% increase (Van Grove, 2010) of average users in the same period. The increase in the number of activist profiles in early 2009 did not continue to grow, as it did in the case of average users (Van Grove, 2010).

Comparing data (Table 1) on whether Twitter profiles contain a short biography or description, we conclude that 69% of average users, a much higher number (Van Grove, 2010), provide such data on their profile than Croatian activists using Twitter (41%).
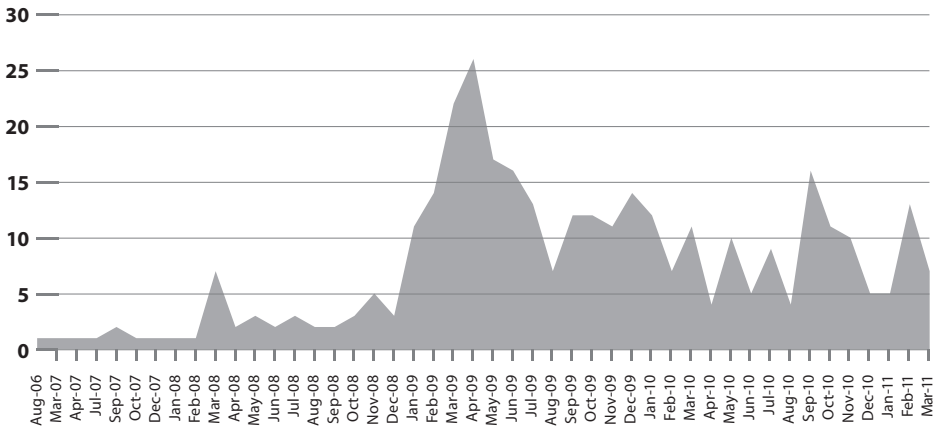
▲ *Graph 1.*
New Twitter Accounts Created
(% of Accounts Created)

Table 1. **Comparison Average VS Activist users**

	Average Twitter Users	Twitter Activists (HR)
Twitter Users with Bio (% of users who provide a bio on their twitter profile)	69%	41%
Twitter Users with Location (% of users who provide a location name on their twitter profile)	82%	41%
Twitter Users with Website URL (% of users who provide a URL on their twitter profile)	45%	64%
Twitter Users with Detailed Name (% of users who provides a detailed name on twitter profile)	76%	27%

As shown in Table 1, 82% of average Twitter users (Van Grove, 2010) clearly define their geographic location. While just 41% of activists using Twitter in Croatia do the same.

Table 1 shows that activists are more likely (64%) than average Twitter users to publish a URL address on their Twitter profile linking to internet locations that provide additional personal information than average Twitter users (Van Grove, 2010).

Activists using Twitter (Table 1) are less likely (27%) to give a detailed first and last name on their Twitter profile than are average users (76%)(Van Grove, 2010).

Table 1 clearly shows that activists using Twitter are not yet ready to reveal their identity, except perhaps a virtual one (URL). This hesitation can serve as an indicator of a lingering fear among the Croatian general population of publicly expressing their political

stances as a consequence of the previous regime, but also of the current attitude of political elite towards contrarian opinions.

62% of Twitter users writing about protests in Croatia are 21% more likely to have over 100 friends than average Twitter users (Graph 2). Activist users having less than 5 friends belong to just 4% of the observed population, while the occurrence of the same criteria in average users is 21%, or 5 times higher (Van Grove, 2010). 58% of average Twitter users have between 5 and 100 friends (Van Grove, 2010), and the same category among activist users amounts to 34% of the population.
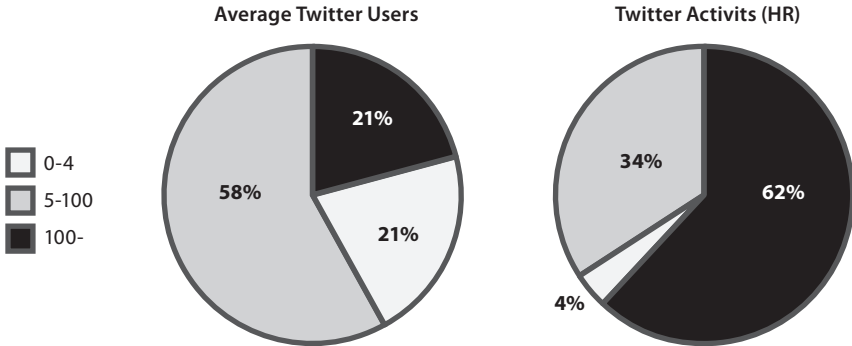
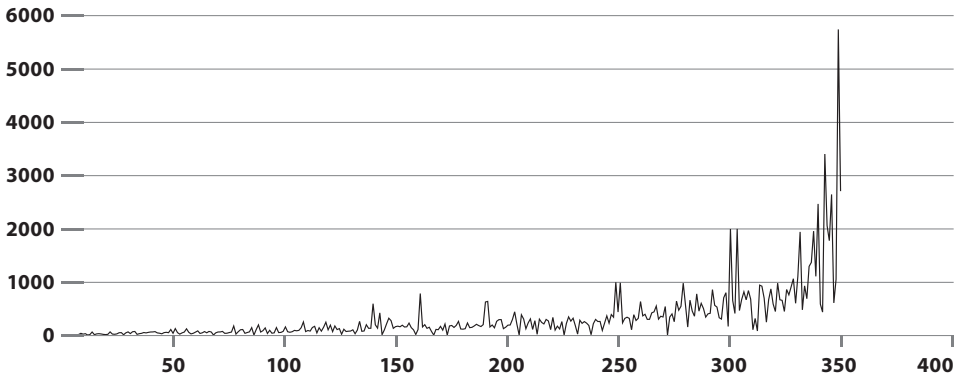▲ *Graph 2.*
Number of Friends a User Follows

The activist Twitter users, 59%, have over 101 followers, while such users having four or less followers is only 3% or 10 times less than is the case with average Twitter users. Average users with 101 or more followers amount to 16%, or 3 times less than the activists. More than half of average users, 52%, are followed by at least 5 and no more than 100 followers (Van Grove, 2010).
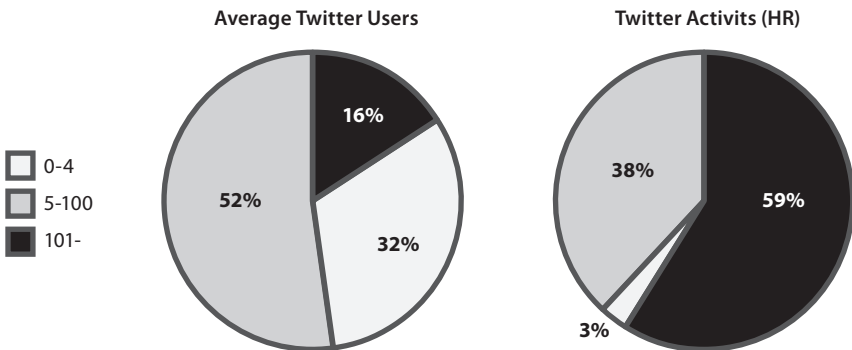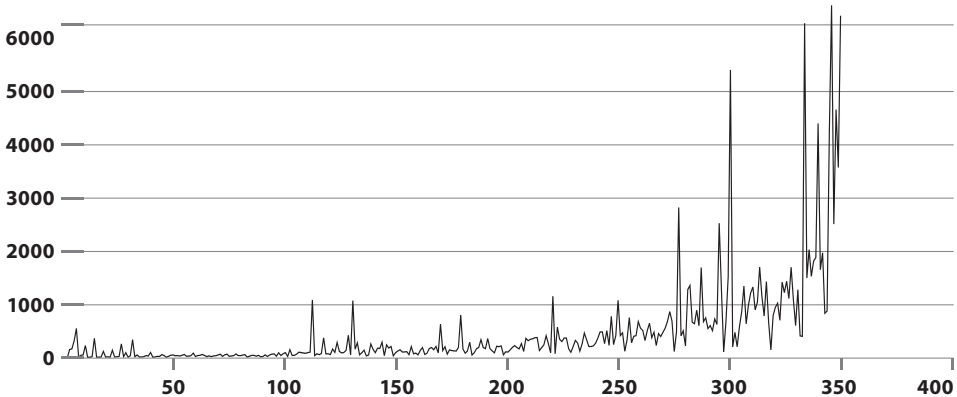

▲ *Graph 3.*
Number of Followers a user has

The two previous graphs show that activist Twitter users have a higher number of friends and followers than is the case with average users. That ratio varies from 1:3 to 1:10 in favor of the activists.

Graph 4 clearly shows that there is no over saturation when analyzing activist Twitter users. The increase in the number of friends followed by users, results in an increase in the number of followers. Such occurrence is in stark contrast to the average users, whose number of followers does become saturated past a certain number (does not increase), while at the same time the number of friends continues to increase. Bernardo A. Huberman et al. (2009) attributes such an occurrence to the ease of adding new friends on Twitter. However, we can see that is not the case when examining activist users.
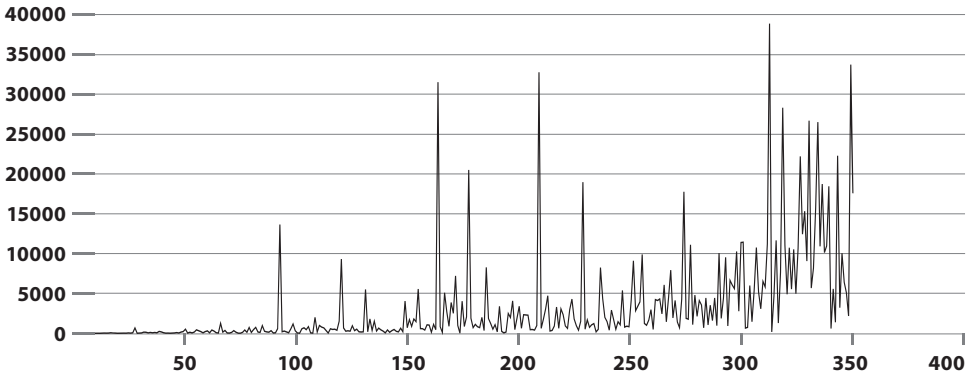

▲ *Graph 4* .
Friends vs. Average Number of Followers

Increasing (Graph 5) the activist user's number of followers leads to an increase in the average number of friends. This shows that activist users perceive Twitter as a relationship building platform.
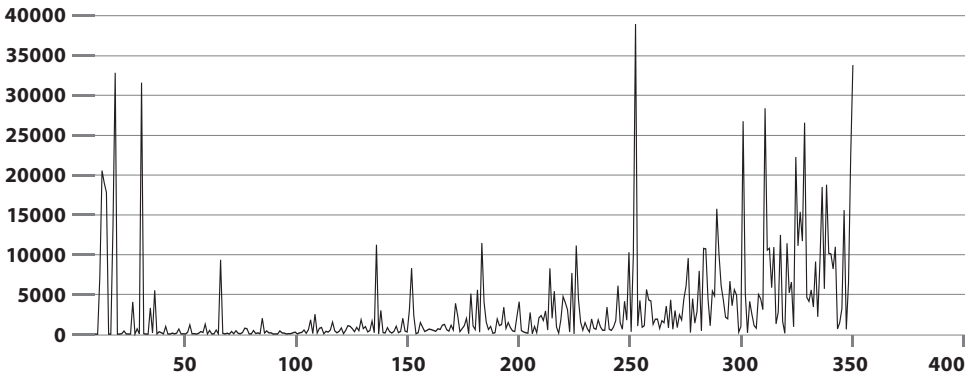

▲ *Graph 5*.
Followers vs. Average Number of Friend

Previous research has shown that "users receiving attention by a larger number of people publish more often than those with less received attention" (Huberman et al., 2009). It is, therefore logical that users with a higher number of friends and followers tend to be more active in publishing new posts. Graph 6 shows that an increase in the number of friends leads to an increase in the number of posts. Graph 7 can be interpreted as showing that the number of posts increases regardless of the number of followers. These results need to be considered carefully, as they could easily be influenced by selection bias. Activist users will publish more posts regardless of the number of friends, implying that activists use Twitter as an information dissemination platform or for self-promotion, and not for their own research and information gathering.

▲ *Graph 6.*
Followers vs. Number of Messages

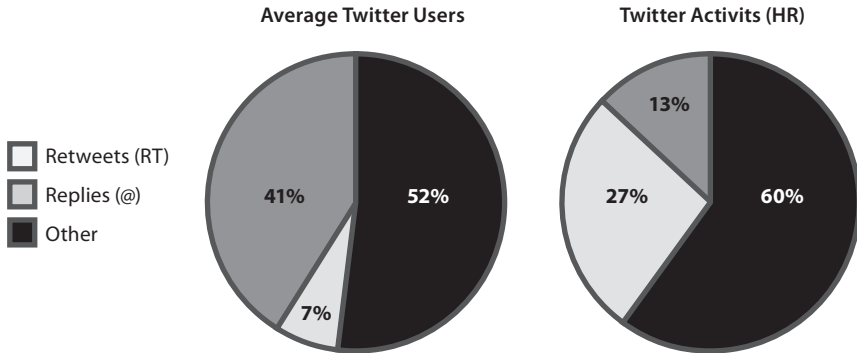▲ *Graph 7.*
Friends vs. Number of Messages

Calculating the ratio of followers and friends of activist users (δ), the result is 2.26, while δ for average users is 0.13 (Huberman et al., 2009). This ratio shows that activist users have more followers than friends on average, which is not the case with average users.

Same as in average user posts (Mustafaraj and Metaxas, 2010: 2), Twitter activist posts follow the power-law distribution (Table 2), with few users creating a larger amount of posts.

Table 2. **Number of messages posted by users**

Number of messages	Number of users	
	Average Twitter Users (Metaxa and Mustafar, 2010:2)	Twitter Activists (HR)
1	22,482	281
2-3	9,121	172
4-7	4,090	120
8-15	2,002	62
16-31	1,093	47
32-63	524	27
64-127	227	11
128-255	88	11
256-511	36	3
512-1024	10	2

When I compare average Twitter users and activists, I notice that activists retweet (RT) 4 times more often, at the same time debating (@) 3 times less than average users. Other communication types make up 52% of average users' posts, and 60% of activists' posts. These numbers lead to the conclusion that activists use Twitter more for informing others than for debating or coordinating activities with the like-minded.

Average Twitter Users   **Twitter Activits (HR)**

Retweets (RT)
Replies (@)
Other

▲ *Graph 8.*
Number of tweets by message type (Metaxa and Mustafar, 2010: 2)

It is noticeable that the largest number of posts about protests were published in the hours (Graph 9) and on the days (Graph 10 and Graph 11) of the protests. This guides us to conclude that Twitter has been used for informing and reporting on the protests, and not for coordinating activities. Most posts were published in the early and late evening, between 5 and 12 p.m. (Graph 9). Those publishing times do not ensure the best exposure of the posts to the general public. According to Pearanalytics research (2009: 9), the best hours for posting are between 9 a.m. and 3 p.m.

▲*Graph 9.*
Post publishing hours
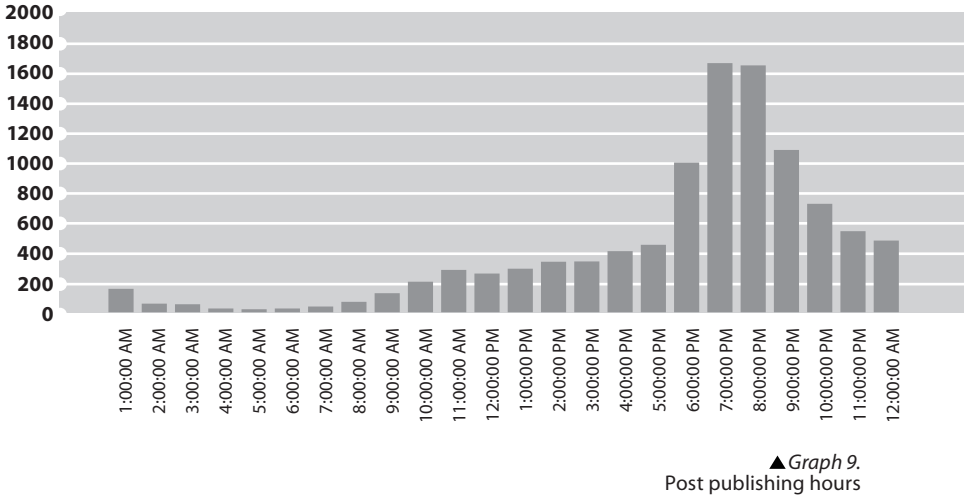
Average users post predominantly between 10 a.m. and 2 p.m. (Honeycutt and Herring, 2009: 3), while the highest % age of activist posts occur at 7 and 8 p.m. (Graph 9). Key days for post publishing have been Wednesday, Friday, Saturday and Sunday (Graph 10).
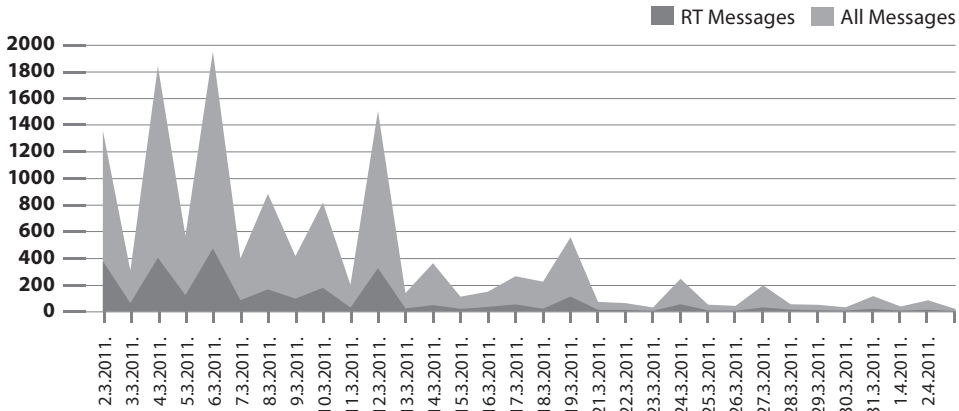

▲*Graph 10 .*
Post publishing days
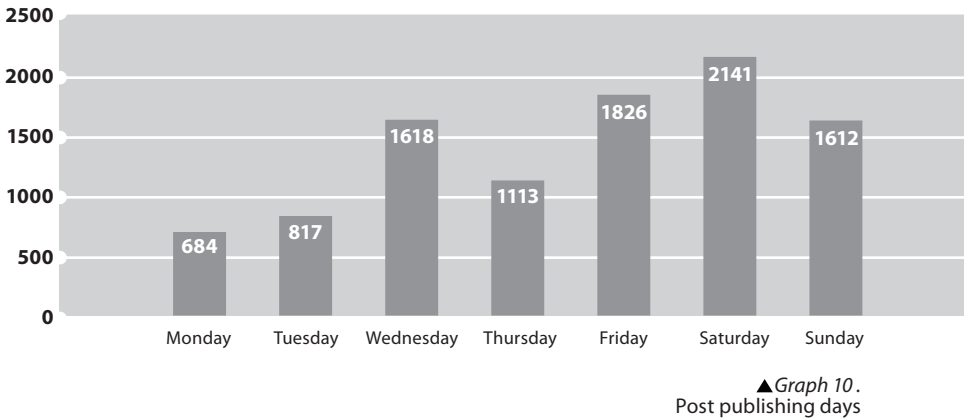
As the table 3 shows, many retweeted posts are not forwarded just once. Activist users' posts are forwarded 4 times, while average users forward posts up to 7 times. It should be considered that users rarely forward posts they disagree with (Mustafaraj and Metaxas, 2010: 3) and that forwarding actually signals agreement with the post's content and the attempt to influence the community (Mustafaraj and Metaxas, 2010: 4). It should also be noted that retweeting requires pressing just one key, while debates require writing a post, which consumes more time and energy (Mustafaraj and Metaxas, 2010: 5). This helps explain the lower % age of debate posts when compared to retweeted ones.

Table 3. **Number of chain retweet messages**

RTs/messages	Number of messages			
	Average Twitter Users (Metaxa and Mustafar, 2010: 2)		Twitter Activists (HR)	
1	47,730	63%	2,704	75%
2	21,090	28%	762	21.11%
3	5,349	7.10%	130	3.60%
4	939	1.25%	13	0.36%
5	149	0.20%	-	-
6	47	0.06%	-	-
7	18	0.02%	-	-

Graph 11 shows that the goal was to inform the community about the protests, rather than to organize the demonstrations. Most posts were exchanged on the very day of the protests (peaks on the graph are a perfect match to the dates of the protests). Most forwarded posts coincide with those dates as well.

▲ *Graph 11.*
RT vs. All Messages

CONCLUSION

Resource mobilization theory from the above examples showed us that tools like Twitter have an important role in organizing and facilitating social movements. From how it is used it is possible to predict how the movement will end up. Croatian activist users were using Twitter to publish the most during the protests, reducing their capabilities of coordinating and organizing protests. The timeframe of registering Twitter user profiles shows that Croatian activist users do not significantly differ from average users, and that activist users registered new profiles following the trends in Western European and U.S. social media – forgetting that social media is not only a source of information.

As opposed to the average users, activist users are not willing to disclose their identity, which can be explained by the political situation and social relations in Croatia at the present time. Activist users have a significantly higher number of friends and followers when compared to average users. Activist users differ in the methods of acquiring friends and followers. Increases in the number of activist users' friends will lead to an increase in the number of followers (and vice versa). Average users' number of friends increase, but the follower number remains within certain boundaries. Activist users publish a higher volume of posts regardless of the follower number, which is not the case with average users. Therefore, activist users use Twitter mainly for disseminating information and self-promotion, disregarding conversation and Twitter usage for research and information gathering.

Activist users have a significantly higher number of followers than friends, which is not the case with the average user. However, activist and average users are similar when analyzing who publishes and how often. Both posting categories follow the power-law distribution, meaning that few users publish the highest number of posts.

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PROFILIRANJE TWITTER-AKTIVISTA: PROSVJEDI PROTIV HRVATSKE VLADE

Mato Brautović

SAŽETAK *Twitter je društvena mreža i mikrobloging servis. Primjeri iz Irana, Tunisa i Egipta pokazali su koje su mogućnosti korištenja Twittera kao platforme za aktivističko djelovanje. Istraživanjem je prikazano kako aktivisti u Hrvatskoj koriste taj alat te u čemu se razlikuju u odnosu na prosječne korisnike. Utvrđeno je da se korisnici aktivisti značajno razlikuju od prosječnih korisnika Twittera. Korisnici aktivisti imaju značajnije veći broj prijatelja i sljedbenika, a s povećanjem broja prijatelja dolazi i do povećanja broja sljedbenika (i obratno). Nadalje korisnici aktivisti objavljivat će veliki broj postova neovisno o broju sljedbenika, iako ih imaju značajnije više nego prijatelja. Korisnici aktivisti mnogo češće prosljeđuju zanimljive informacije, a zanemaruju upotrebu Twittera za konverzaciju, odnosno koordiniranje. Ipak, korisnici aktivisti i prosječni korisnici slični su s obzirom na to tko i koliko objavljuje. Obje kategorije korisnika prate* power-law-*distribuciju.*

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