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Comment on Elena Pavan/2. Connecting Collective Actions to Social Media: Comments on an Exploratory Empirical Exercise

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Essays

Comment on Elena Pavan/2

Connecting Collective Actions to Social Media: Comments on an Exploratory Empirical Exercise

by Nicholas W. Jankowski

1.   Introduction

During the past few years it has become commonplace to associate social movements with social media. Such associations have sometimes been formulated matter-of-factly and were particularly frequent during the Arab Spring, which was termed a "Facebook Revolution" by popular media [e.g. Hauslohner 2011; Vargas 2012]. Some scholars have also claimed a major role for social media during such upheavals, and in her article "Collective action and Web 2.0" Elena Pavan [2013] points to the debate between Clay Shirky [2011] and Malcolm Gladwell [2011] published in *Foreign Affairs* during the crises across the Arab world in 2011.[1] What has been missing from much of this debate, as Pavan points out, is empirical evidence supporting or refuting the possible relation between social media and social change.

2.   Pavan's Study

Pavan's study is designed to contribute to the collection and assessment of such evidence and examines a different case of social mobilization: the annual campaign "Take Back the Tech!" (TBTT), which is targeted at gender-based violence

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[1] The contribution by Gladwell in *Foreign Affairs* is limited; a more elaborate version of his position is available in an earlier *New Yorker* essay [Gladwell 2010].

and which explores ways to utilize communication technology for that objective. In addition to elaboration of this case study, Pavan's article in *Sociologica* provides the reader with a valuable review of literature related to (social) media and social action.

The main purpose of the article is to suggest an approach to empirically examining the relation between social media and social change. Pavan argues that an all-encompassing approach needs by necessity to include four components:

1. Examination of the actors engaged;
2. Determination of the connections established;
3. Consideration of the content produced; and
4. Exploration of the patterns of content distribution.

The article illustrates this approach through examination of a small slice of the Twitter exchanges related to an annual event, "Take Back the Tech!" (TBTT). Pavan examined 100 tweets on a single day during the 16-day TBTT event in November 2011 in order to demonstrate the potential of the analysis procedure proposed.

Various questions were formulated as guidance for the study. Although not composed as formal research questions, the following queries are interspersed in the article and are related to two of the four components noted above, actors and connections:

– Actors

"What are the characteristic of prominent campaigners?"

"[A]re prominent campaigners single individuals or are they organizations that opened a Twitter account? Do prominent campaigners have an organizational membership or do they speak on their personal capacity?"

– Connections

"Who are the[se] highly and systematically recognized nodes?"

"How much is prestige linked to a nodes overall popularity or to her more or less intense use of the social media platform? In other words, are prominent campaigners simply highly followed Tweeters or Twitter-maniacs?"

Explicit questions could not be found for the other two components, content and distribution, although information is provided on the categories of Tweet content and the geographic distribution of the Tweets. Regarding the category content, the following sentence suggests the research interest for this category: "Looking at the contents of retweeted messages can help us understanding what is the discursive contribution that online-networked structure of participation can bring to the overall mobilization" [Pavan 2013, 19].

With these queries as points for direction, the selected 100 Tweets were analysed. The NodeXL[2] social network analysis template was used to plot relations between the origins of these Tweets. Examination of the resulting maps of networks constitutes the major thrust of the analysis in the paper.

While much freedom is available for researchers preparing exploratory studies, I am uncertain whether this study presents adequate evidence supporting the proposed model for analysis of actors, connections, content, and distribution of online messages. In the first place, no relation is made between online communicative expressions and offline collective actions, which is one of the basic tenants of the model. Pavan suggests that there is a "progressive merging of online and offline spaces in a sole, hybrid social space" and the dynamics of collective action are "more and more defined as a 'mix' of online and offline activities…" [*ibidem*, 2]. Effort to determine the nature of that mix or merging, however, is not undertaken in the study, even though TBTT involved many forms of action, both online and offline.

More directly related to the model, in particular the distribution pattern of messages, the study relies on data collected during a single day of the 16-day action. Although data were collected at various unspecified times during that day, no differentiation is made between the collection time points. This means that the study is not longitudinal and, consequently, there is no way to trace patterns of Twitter messages between locations or between different days of action. The opposite, however, is suggested in the article through use of words like "flow," "spanning," and "reaching," as expressed in the following sentence: "…we find [out] that the flow of tweets shows a cross-regional breadth spanning from the US and Canada to Pakistan, passing through Latin America and Europe an[d] reaching to Africa and India" [*ibidem*, 13]. This statement relates to Figure 1, which is duplicated below.

This figure does not present "flow" of Tweets as suggested in the above text, but instead provides a rough indication of the geographic distribution of Tweets for the single day of data collection. There is no indication where original messages may have been initiated. While the figure does suggest contributions from a range of countries and geographical regions, such distribution says nothing about sequential flow of messages. A longitudinal study with data collection at multiple points in time would have provided clues as to how messages flow and "pass through" geographic regions.

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[2] For information on this social network analysis software, see: Hansen, Shneiderman and Smith [2011]. See also NodeXL website: http://nodexl.codeplex.com/.
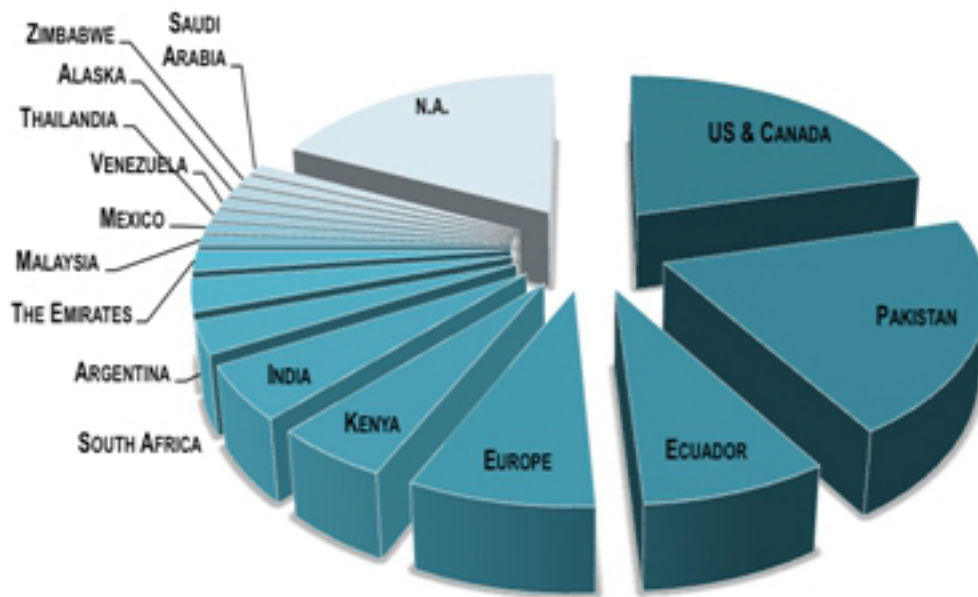
F<small>IG</small>. 1. Geographic Distribution of Tweets in Pavan Exploratory Study.

Source: Fig. 2. Time zone of 100 tweets sent with the #takebackthetech hashtag. Pavan 2013, 13

Note: N.A. = Data not available

Investigation of the content of the Tweets is also a point of concern. As noted above, examination of the patterns of communicative content is one of the four components of the proposed model and a form of content analysis seems to have been conducted. Pavan suggests two clusters of retweeted messages: calls for action and those with a theme orientation. Examples of each message type are provided in the text and a cluster analysis was performed to ascertain the relation between message themes and hashtags; see Figure 7 in Pavan (*ibidem*, 21). Although this analysis seems to have potential to differentiate themes along the lines of hashtags, the limited sample size probably contributes to the wide diversity of themes reflected in the figure and the far from conclusive statement at the end of Section 3.3.

3.   An Alternative Research Design

Philip Howard *et. al.* [2011] prepared a report on the role of social media during the "Arab Spring," which addressed many of the same questions posed in Pavan's study. The Howard study compiled data from a number of social media – Facebook, Twitter, YouTube – and from other Internet resources. Most impressively, the researchers examined some 3 million Tweets and performed a social network

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analysis on the data. Basically they found that the social media were instrumental in shaping political debates in the region. They also determined a longitudinal relation between social media conversations and offline demonstrations and protests. Finally, the researchers assert that the use of social media contributed to global awareness of events in the Middle East.

While there is much that can be said about these primary conclusions and the related evidence, my main point here is to indicate some of the features of the research design and compare them to the design proposed and illustrated in the Pavan study. The first point of importance is that the Howard *et. al.* study is longitudinal and a number of the analyses reflect that feature. For example, Figure 2 below (Figure 4 in *ibidem*, 17) charts the frequency of Tweets for different geographic regions at different points in time. Such longitudinal presentation allows the researchers to make comparisons between locations at different points in time.
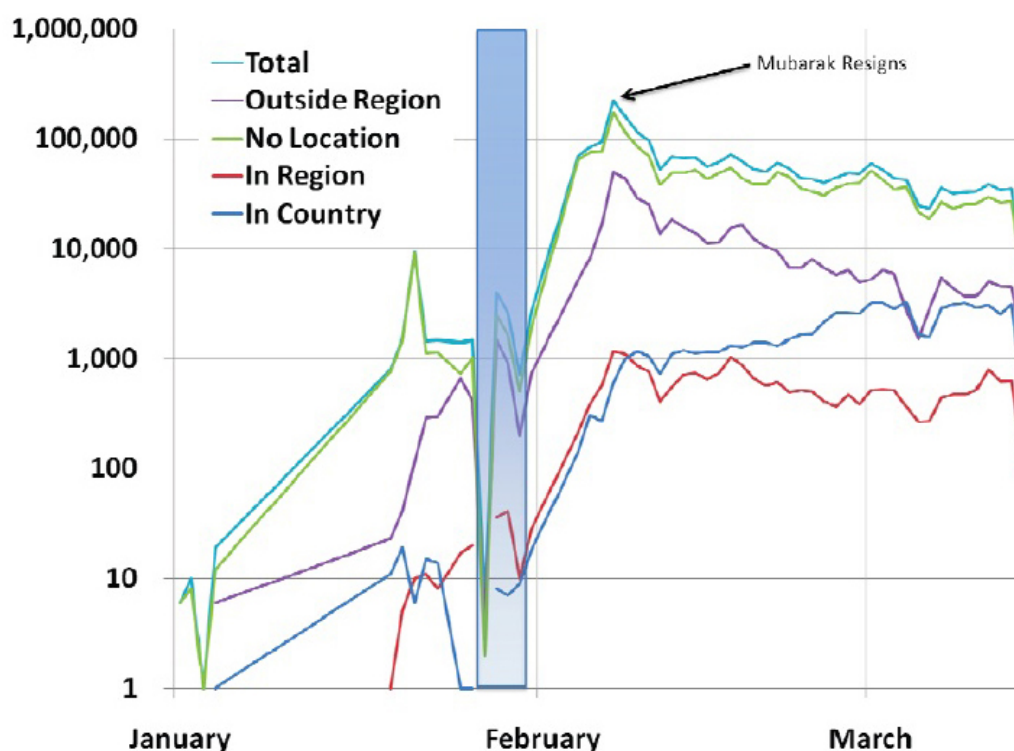

FIG. 2. Frequency of Tweets per Region and Month

Source: Fig. 4. Logged Number of Tweets on #egypt, by Location. Howard *et al.* 2011, 17.

Notes: "Outside Region" refers to Twitter profiles that had locations outside both the country and the region, and "No Location" refers to profiles that either had no location data or have been deleted or suspended since archiving began. The blue bar indicates the period in which journalists began reporting that protests had reached the level of "thousands" of participants.

One additional point of comparison between the Pavan study and that by Howard and colleagues may be valuable. Both teams of researchers conduct a social network analysis of data. The analysis by Pavan is reflected in several network maps, one of which (Figure 7 in Pavan 2013, Section 3.3, 21) suggests the relation between retweeted messages. Basically this figure suggests the centrality of hashtags related to the TBTT action with numerous limited contributions from other hashtags to the network map. More differentiation and comparison at different points in time might have been made visible with a larger sample than 100 Tweets and a single point in time for data collection.
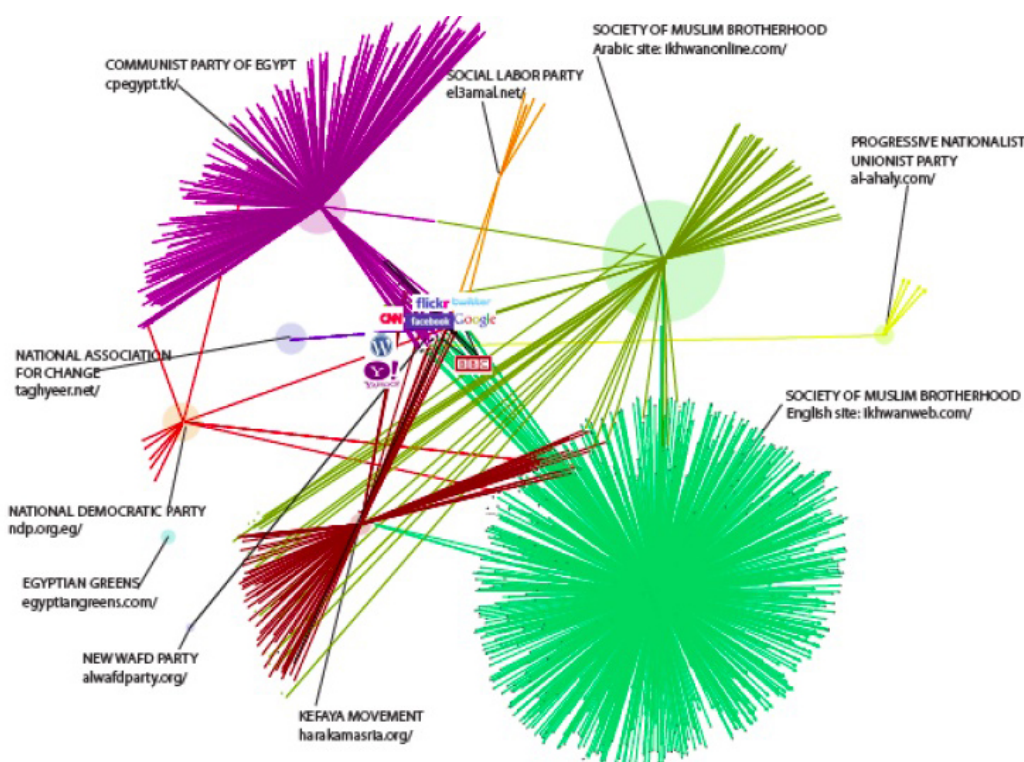

Fig. 3. Social Network Analysis of Actors in Egyptian Revolution.
Source: Fig. 5. Structure and Content of Egypt's Online Political Sphere, November 2010. Howard *et al.* 2011, 19.

One of the Howard et al. social network maps is reprinted as Figure 3 (Figure 5 in Howard *et al.*, 2011, 19). It suggests a wide range of interactions between actors involved in the revolution in Egypt, reflected in the links between Web sites of political parties and other organizations. Together with the text of the report, this figure provides possibility for comparing the relations between actors. It appears, for example, that there are few links between the Communist Part of Egypt and the Society of Muslim Brotherhood, and that some parties (e.g. National Association for

Change and Progressive Nationalist Unionist Party) are quite isolated. Although not reproduced below, Howard and colleagues prepared a second map of the same actors six months later (Figure 4 below; Figure 6 in Howard *et al.*, 2011, 20), which allows for comparison at two moments in time. Both the clarity of the visualizations and longitudinal nature of the analysis provide welcome opportunity for understanding the influence of core actors across time.
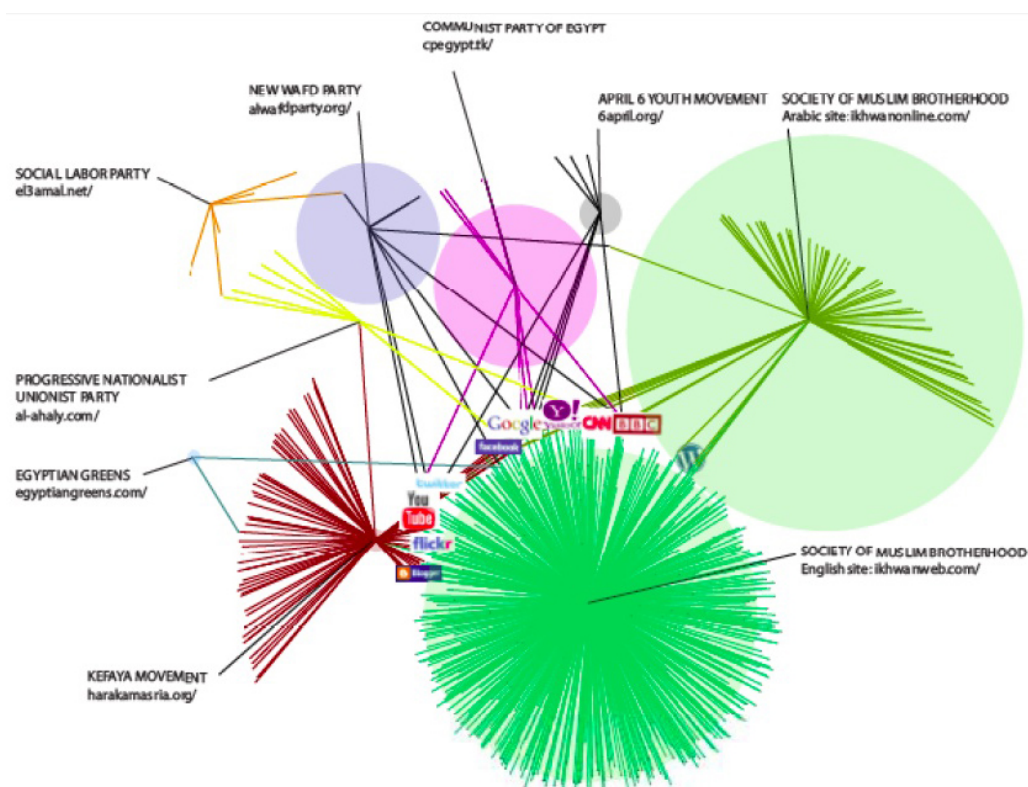

F*IG*. 4. Structure and Content of Egypt's Online Political Sphere, May 2011
Source: Fig.6. Howard *et al.* 2011, 20.

Background information on research methods used in collecting and analysing social media is particularly important given changes in terms of service Twitter and other companies impose at different times. The Howard *et al.* report includes four appendices that help the reader understand how analysis took place for the Twitter data, the Tunisian blogosphere, the Egyptian political Web, and for YouTube videos. While it would be uncommon to find such detail in a journal article, and in that respect it is understandable that more detail is not provided in the Pavan article. Still, a supplementary Web site for the research project would have helped interested readers trace data collection and analysis procedures.

As important as such procedures are, access to the data is even more important and is increasingly being required for major research projects. Neither the Pavan study nor that prepared by Howard and colleagues provide access to the data. Such access is less important for an exploratory study like Pavan's, but is much more relevant and suitable for a study of the scale conducted by Howard and colleagues.

4.   Conclusion

Pavan asserts in the conclusion to her article that the features of the network examined "confirmed" that online contributions "provide an overall relational infra-structure" for exchanges [Pavan 2013, 23]. Further the author asserts the presence of individual and social actors "confirmed ... [the] logic of mixed agency" [*ibidem*, 23]. Such language is common for hypothesis-testing research designs, but not for exploratory studies with limited datasets. It would be more appropriate, it seems, to postulate such relations as hypotheses for a full-fledged study.

Pavan acknowledges the limited nature of the data and recommends "more systematic analysis," and comparison with other case studies. This is not only the challenge for Pavan – to expand this heuristic exploration of a single instance of collective action – but to all researchers concerned with the relation between online and offline forms of social action.

I recommend three basic research design principles as extensions to the model proposed by Pavan. First, the value of a study is increased considerably when it is longitudinal in design, thereby allowing for comparison of findings at different points in time. This design aspect is particularly valuable for collective actions such as TBTT which extend over a period of time and are repeated annually.

Second, to the extent there is theoretical concern regarding the relation between online and offline forms of collective (social) action, it is essential that data collection takes place both in the online and offline venues of the action. Initiatives like TBTT seem to oscillate between both venues, and it seems appropriate to understand the (symbiotic) relation between these two arenas for communication and action.

Third, it is valuable to examine multiple forms of social media involved in an action. While social network sites like Twitter are clearly important, they are also very limited in message length and, consequently, the message substance that can be analysed. To the extent that public discourse is a research interest or, formulated differently, to the extent that the contribution of social media to collective action and the public sphere is important, it becomes essential to investigate a range of social media related to the collective action.

Finally, I recommend making datasets emerging from such studies available to other researchers for replication and secondary analysis. As already mentioned, the principle of open data is becoming increasingly required in some disciplines and by some funding agencies (e.g., National Institute of Health, NIH)[3] Research institutions such as Pew Internet & American Life Project (http://www.pewinternet.org/) already have a long-standing policy of providing researchers access to the data of their studies. Researchers involved in the investigation of collective actions would benefit from such data availability, and this could also facilitate Pavan's own recommendation for further case studies based on the proposed model. Of course, it is imperative that such datasets are more extensive than in Pavan's study. The dataset related to the Howard *et al.* [2011] research seems suitable for further analysis and its availability would be a welcome contribution to other studies of social media and social action.

In conclusion, the data from Pavan's exploratory study was collected in November 2011. Since the TBTT action is repeated annually, it would have seemed appropriate to expand the exploration with a more robust investigation during the 2012 action. Various contingencies may have prevented such extension, but it is hoped the study of future TBTT actions are being planned in order to further develop the model and contribute to comprehending the relation between collective actions and social media.

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Comment on Elena Pavan/2

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Abstract: This article comments on an exploratory study by Pavan (2013) of collective action and social media. The proposed model in the study suggests blending evidence from actors, connections, content, and distribution of online messages, but limited blending is presented. Further, the study lacks a longitudinal dimension; data was collected on a single day and no follow-up study for the annual event was conducted or proposed. This article compares Pavan's study with another examination (Howard *et al.*, 2011) of social action and social media that does examine more data from more sources, all across time. While the exploration and proposed research design is interesting, further development, along with longitudinal data collection, would have strengthened the work.

Nicholas W. Jankowski initiated the journal *New Media & Society* (*NM&S*) in 1967 and served as co-editor through 2012. His book publications include *Internet and National Elections: A Comparative Study of Web Campaigning* (co-editor, Routledge, 2007) and *e-Research: Transformation in Scholarly Practice* (editor, Routledge, 2009). One of Jankowski's current research interests is scholarly publishing and in 2013 he co-edited a special issue of *NM&S* (vol. 15, 3) on the topic. Email: nickjan@xs4all.nl