Draft paper

Networked Collective Action in the 2014 Hong Kong Occupy Movement: Analysing a Facebook sharing network

KW Fu & CH Chan

Journalism and Media Studies Centre

The University of Hong Kong

Abstract

Using a "big data" approach, this study aims to demonstrate and analyse the way in which the formation of an online network, i.e. posts sharing between Facebook pages, help construct a countervailing power during the course of the Hong Kong Occupy Movement (or called "Umbrella Movement"), which protested against the electoral reform framework imposed by the Standing Committee, China's National People's Congress in relation to the implementation of universal suffrage for the 2017 Hong Kong Chief Executive election. The result indicates an empowerment of emerging civil society in the venue of policy debate, whereas there was a disintegration between institutional political forces and the civil society. This may not be conductive to an institutionalized policy formation involving a variety of stakeholders amid the controversy.

Background

The role of Internet in social movement is a long-standing contentious subject in the field. While popular narrative tends to celebrate the Internet as a driving force behind the social movement or even leading to a "revolution", many others, especially those in the scholar community, rather argue that the actual impact of the Internet in facilitating collective action or grassroots movement was often overstated. Critical argument raised by Evgeny Morozov exemplifies this line of counter-optimistic view on the Internet, which is described as "net delusion" (Morozov, 2011). Specifically, in the Arab Spring and the 2011 Egyptian protest, while "Twitter revolution" was usually mentioned by the mass media, most movement-related social media activities indeed did not originate from local protesters and neither drove them to the street but rather the post were mostly written by international bloggers.

This is a good lesson for us as a social scientist who is supposed to be professionally trained to take *social context* seriously. Instead of asking typical "impact of the Internet" type of questions, we intend to raise the following queries in this study: Where did the social media activities come from? Who were the users? How did they group in clusters? Were they representative? What social media tool did they use in the movement? What political ideology do they represent? Without properly addressing these questions, some scholars are inclined to "imagine" social media as a "global information flow" sphere (Lotan et al., 2011)

where worldwide social movement or grassroots activities in the world are assumed to be online traced and the activities' online presence is representative. Of course, this inclination may be partly attributable to the convenience of data collection using software package, i.e. availability of Twitter dataset in commercial service. Nevertheless, such assumption does not always reflect reality, at least in some part of the world, and must be subject to empirical validation. For example in China, where Twitter is blocked by the authorities, Chinese citizen use local version of microblog, called Weibo, for discussion of grassroots movement (Fu & Chau, 2014). Even in a relatively open and free media society, say Hong Kong, Twitter use is not popular in the city and the main social media platform is the social networking site - Facebook.

Facebook is a social networking service that is primarily designed for facilitating inter-personal communication among friends and close user group. Facebook user's profile is not often open access unless you are among that user's friend group. In this sense, the Facebook-enabled communication between friends is not part of the "publics". However, Facebook enables user to build publicly accessible Facebook page which groups users, who have "liked" the page, into a public cluster for online activities such as information sharing, discussion, and collaboration, i.e. *online communities*. Interestingly, according to the mechanism of the Facebook Page, user activities' on the Facebook page, say liking, sharing, and commenting post of the page, can be "publicized" in a way that the "publicized" online activities can be publicly viewable, can be routed via the user's social graph, sent to the private domain of the Facebook, and appear on other Facebook users' news feed, which constitutes the online communities.

Networked Collective Action

Over decades, social scientists have long identified the connection between civic organization, collective action, and political development (Spires, 2011; Tocqueville, 1988). In Tocqueville's work (1988), civic organization or non-governmental organization (NGO) are known as self-governing social unit that can facilitate social problem-solving by forming deliberative body or by taking social action rather than relying on government's intervention. Even in authoritarian and non-democratic regime (Spires, 2011), civil society associations can serve as an independent force and resistance to the state and "is treated as an autonomous sphere of social power within which citizens can pressure authoritarians for change, protect themselves from tyranny, and democratize from below" (Foley & Edwards, 1996).

In Hong Kong, civil society associations have also played significant role in social movement. When a mass protest was organized against a controversial national security legislation in 2003, civil society associations, like religious group and legal professional, played key role in opinion leadership and mobilization for public assemblies (Ma, 2005). In 2012, the Hong Kong government withdrew a secondary school "moral and national education" curriculum that was strongly opposed by a coalition formed by teaching union, religious bodies, parents group, and student societies (Morris & Vickers, 2015).

Internet enables the formation of ad-hoc and voluntary social group as well as reinforces online presence of existing civic associations. Internet communication is conceptualized as a "network" of connectivity which has brought a "logic of connective action" to renew social action (Bennett & Alexandra, 2013). It enables network-connected individual and organization with greater capacity for information dissemination, social

mobilization, and crowd coordination, which are essential components of new wave of social movement. Especially in the political setting of authoritarian regime or non-democratic society where civil society is not well established (Fu & Chau, 2014), Internet can bring liked-minded critical citizen together, consolidate, and construct a countervailing power in a social structure of online network (Castells, 2009) which, as some optimists believe, can drive social change or policy development, instantly or gradually. However, the connection between online collective action and policy change (if any) is usually elusive (Calderaro & Kavada, 2013).

Facebook in Social Movement

Facebook is the most popular global social network sites which is defined by boyd & Ellison (2007) as a service that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system. Political activity on Facebook is a predictor for offline political participation (Vitak et al., 2010). Using pictures sharing and status updates, Facebook has been found to be instrumental for information dissemination and mobilization in the Occupy Wall Street movement (Gaby & Caren, 2012) and the protests against the proposed introduction of "moral and national education" program by the Hong Kong government (Morris & Vickers, 2015).

This study aims to demonstrate and analyse the way in which the formation of an online network, i.e. posts sharing between Facebook pages, help construct a countervailing power during the course of the 2014 Hong Kong Occupy Movement (or called "Umbrella Movement"), which protested against the framework imposed by the Standing Committee, China's National People's Congress in relation to the implementation of universal suffrage for the 2017 Hong Kong Chief Executive election.

Method

We started retrieving Facebook post data from most of the Hong Kong based Facebook public pages. Using 5 selected seed pages, Facebook pages were collected using Facebook Developer API through snowball sampling by tracing shared links to other pages. The sample inclusion criteria is that the pages are either evidently originated from Hong Kong or majority (>70%) of the stories posted are related to Hong Kong. The inclusion of pages was checked by the second author.

During July to December 2014, a total of 1,397 pages were sampled and confirmed by the author to be relevant to Hong Kong. All included pages had a complete record of timeline data from July 01 to December 20, 2014, where the timeline data included status update, photos, and links shared. A weighted and directionally edge was formed between two Facebook pages (nodes) when one page shared a post from another page (an edge), where the weight of edge denotes the overall number of shared posts within the study period. For example, a directed edge was denoted to show a shared post from one page to another, i.e. the direction of edge indicates the flow of information from Page A to Page B, say A -8->B means 8 posts of Page A are shared by Page B.

Connectivity between pages represents whether or not their ties is strong or weak, creating an online community. The larger number of shared posts, the stronger ties between

the pages and the higher chance they belong to same community. Community membership of each Facebook page was computationally determined by an unsupervised walktrap community detection algorithm (Pons & Latapy, 2005). Once the community is defined, main actors with each community were defined as those who have high betweenness centrality and/or high out-degree centrality.

Result and Discussion

The overall sharing network was constructed with 41,404 shared posts (edges) within which 1,397 Facebook pages (nodes) were included. As shown in Figure 1, eight online communities with at least 10 pages were detected and presented in different colors. Size of each node denotes the level of betweenness, i.e. the more centrally-located node the larger amount of betweenness. The number of members in each community ranged from 11 to 338.
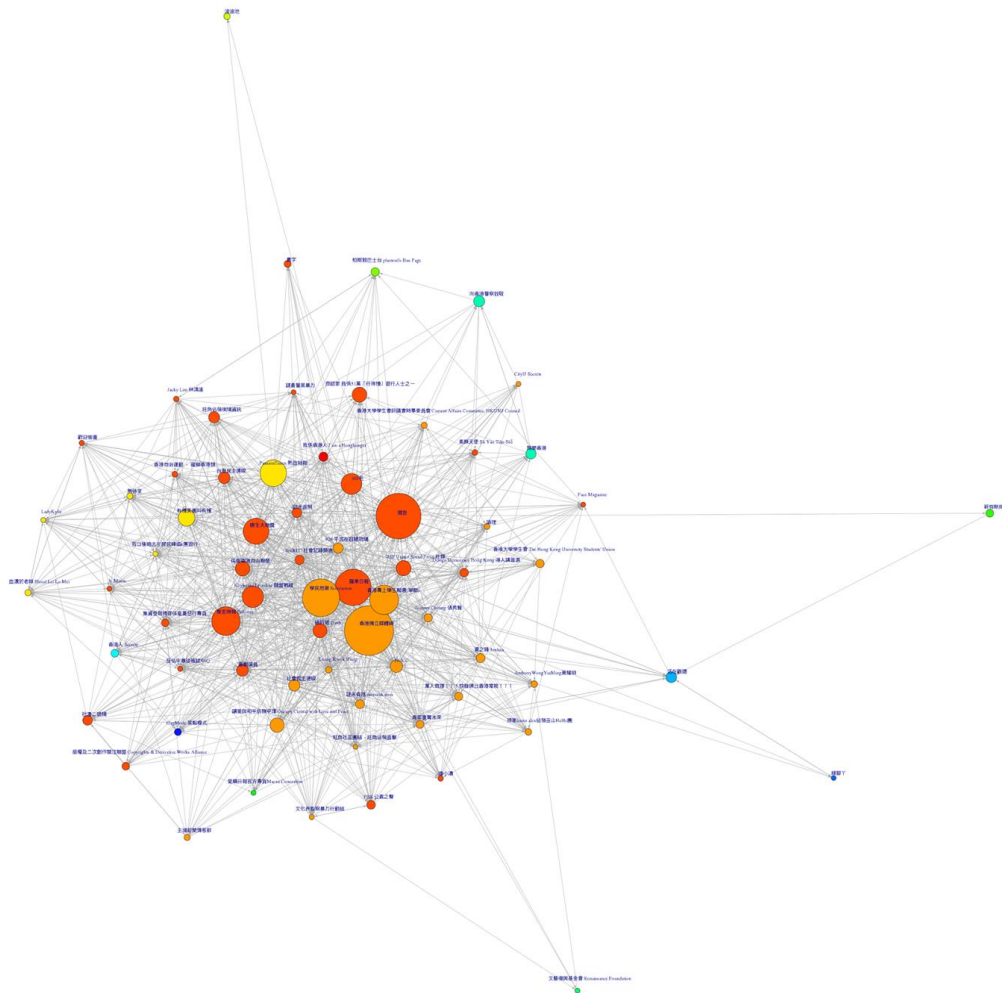
Figure 1

Interconnectivity between Facebook pages

Characteristics of the eight online communities were listed in Table 1. Generally speaking, the online communities within the whole Facebook sharing network seem to be primarily segregated by political ideologies across the spectrum from pro-democracy/pro-activist camp (Group 1, 2, 3, and 4) to pro-government/pro-Beijing camp (Group 6, 7, and 8). In Table 1, name of each community was given as a connotation by the second author to indicate its political ideology and was verified by the first author.

As seen in Table 1, some established civic associations were found on the list and were located in key positions of the network of connectivity of the Mainstream pro-activists and Activists online communities, i.e. in term of betweenness centrality measure. They include Hong the Kong Federation of Student (the largest tertiary education student body in Hong Kong), Scholarism (a high school student body and the leading organizer of the movement), Apple Daily (a pro-democracy local newspaper), and the Occupy Central with Love and Peace (the main campaign group led by law professor Benny Tai, sociologist Kin-man Chan, and Reverend Yiu-ming Chu).

Nevertheless, other main actors of the network were mostly non-institutional players, including independent online media (e.g. Dash and Hong Kong Inmedia), popular bloggers, and some self-organizing and single-issue-driven groups, representing a wide spectrum of political views, organizational structures, and the level of resource. Moreover, the result evidently shows an emerging community called Autonomists (Group 3 in Table 1), who gives unequivocal support to Hong Kong's autonomy against China's intervention and inclines to position Hong Kong as a separate and independent entity from China. This online community was noticeably separated from other main activist groups and its position toward China was drastically different with other activist's groups.

Another pro-activist online community was found and is formed by a number of local environmentalist and conservationist organizations (Group 4 in Table 1). Their main concerns are environment protection, recycling, and heritage preservation but not directly related to politics.

Our finding demonstrates an integration between established civic associations and a set of networked communities via the Facebook sharing, which are mainly constructed by a number of independent media, bloggers, and single-issue-driven ad-hoc groups, showing an empowerment of an emerging civil society in the venue of policy debate. But on the other hand, while the traditional political parties (e.g. The Democratic Party and Civic Party) and political elites (e.g. labor union leaders, scholars, and writers) were relatively marginalized in the network and could not establish a strong connectivity with the civil society, the linkage between non-institutional forces and political institutions were indirect. These traditional players were often accused of being too conservative toward the collective action and the campaign tactics by some radical activists and as a result the political parties played a relatively passive role in the movement. They did try to be active on the social media but eventually cannot take advantage in the growth of social media as a communication channel and thus, as reflected in our finding, cannot be sufficiently integrated into the overall communication network of online communities.

This may not be conducive to a healthy dialogue among different stakeholders as well as an institutionalized and deliberative policy formation involving a variety of political forces

in Hong Kong and Beijing. This signifies, in a long run, a possibility of radical change in political order, institutionally and non-institutionally, in Hong Kong.

Conclusion

While the situation is still developing and further data are essential for a rigorous analysis, our conclusion is tentative. Using a "big data" approach, our preliminary finding suggests that Facebook pages can be understood as a network of interconnectivity or a set of online communities formed by Facebook sharing during the policy debate of the constitutional reform in Hong Kong. Each community can be characterized by one's political ideology and the position toward democratic development in Hong Kong and the Hong Kong/Beijing government. Moreover, traditional theories often emphasize the role of civic associations in collective action and our finding suggests that civic associations did play key role in the movement but many other non-institutional players were also central to the movement and helped broaden the scope of political spectrum. However, we argue that the traditional political parties and elites were relatively marginalized in the network of connectivity and were in a worse position to serve as a bridge between the authorities and the civil society.

Table 1

Online communities

Community Number	Number of pages	Name	Examples
1	338	Mainstream pro-activists	Apple Daily (mainstream media) Dash (online media affiliated with the Scholarism) USP United Social Press (online media) Keyboard Frontline (online media)
2	274	Activists	Hong Kong Federation of Student (student organization) Scholarism (student organization) Hong Kong Inmedia (online media) Occupy Central with Love and Peace (activist) Polymer (online media)
3	94	Autonomists	Passion Times (activist/online media) Hon9 Kon9 (online media) Dadazim (online media)
4	18	Environmentalist /Conservationists	Grebbish (community organization) Yue Man square (community organization) Help Tai Wei (community organization)
5	20	Irrelevant	Hong Kong Jokes
6	24	Pro-Beijing #1	Salute to Hong Kong Police (online media) Hong Kong Good News (online media)
7	11	Pro-Beijing #2	Silent Majority (online media) Support Hong Kong Police (online media)
8	14	Pro-Beijing #3	We are Chinese and proud of it (online media) One Man One Vote, Anti-Occupy (online media)

Acknowledgement

Reference

Bennett, WL, & Alexandra, S. (2013). *The logic of connective action : digital media and the personalization of contentious politics*. New York: Cambridge University Press.

boyd, dm, & Ellison, NB. (2007). Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication, 13*(1), 210-230.doi:10.1111/j.1083-6101.2007.00393.x

Calderaro, A, & Kavada, A. (2013). Special Issue on "Online Collective Action and Policy Change". *Policy & Internet, 5*(1), 1-6.doi:10.1002/poi3.19

Castells, M. (2009). *Communication power*. Oxford ; New York: Oxford University Press.

Foley, MW, & Edwards, B. (1996). The paradox of civil society. *Journal of democracy, 7*(3), 38-52

Fu, KW, & Chau, M. (2014). Use of Microblogs in Grassroots Movements in China: Exploring the Role of Online Networking in Agenda-Setting. *Journal of Information Technology & Politics, 11*(3), 309-328.doi:10.1080/19331681.2014.909344

Gaby, S, & Caren, N. (2012). Occupy Online: How Cute Old Men and Malcolm X Recruited 400,000 US Users to OWS on Facebook. *Social Movement Studies, 11*(3-4), 367-374.doi:10.1080/14742837.2012.708858

Lotan, G, Graeff, E, Ananny, M, Gaffney, D, Pearce, I, & boyd, d. (2011). *The Arab Spring/ The Revolutions Were Tweeted: Information Flows during the 2011 Tunisian and Egyptian Revolutions* (Vol. 5).

Ma, N. (2005). Civil Society in Self-Defense: the struggle against national security legislation in Hong Kong. *Journal of Contemporary China, 14*(44), 465-482.doi:10.1080/10670560500115416

Morozov, E. (2011). *The net delusion: The dark side of internet freedom*. New York: Public Affairs.

Morris, P, & Vickers, E. (2015). Schooling, politics and the construction of identity in Hong Kong: the 2012 'Moral and National Education' crisis in historical context. *Comparative Education*, 1-22.doi:10.1080/03050068.2015.1033169

Pons, P, & Latapy, M. (2005). Computing communities in large networks using random walks *Computer and Information Sciences-ISCIS 2005* (pp. 284-293): Springer.

Spires, AJ. (2011). Contingent Symbiosis and Civil Society in an Authoritarian State: Understanding the Survival of China's Grassroots NGOs. *American Journal of Sociology, 117*(1), 1-45.doi:10.1086/660741

Tocqueville, A, de. (1988). *Democracy in America* (George Lawrence, Trans.). New York: Harper Perennial.

Vitak, J, Zube, P, Smock, A, Carr, CT, Ellison, N, & Lampe, C. (2010). It's Complicated: Facebook Users' Political Participation in the 2008 Election. *Cyberpsychology, Behavior, and Social Networking, 14*(3), 107-114.doi:10.1089/cyber.2009.0226