Communication battles on Facebook in Hong Kong’s Umbrella Movement and Taiwan’s Sunflower Movement

Joyce Y.M. Nip 1  King-wa Fu 2  Yu-Chung Cheng 3

Abstract

Many have suggested that communication on social media could mobilize participation in social movements. Often overlooked is the use of social media communication by opponents of social movements to counteract the change advocated. Collecting data from the Facebook Graph API, this study examines both types of communication on public pages of Facebook in the Umbrella Movement in Hong Kong and the Sunflower Movement in Taiwan in 2014. It analyzes the content of public messages (1,389 from Hong Kong and 999 from Taiwan) collected on 10 pro- and neutral/anti-movement pages in each movement to study the framing process of the movements in the flow of communication. Changes in frames from posts to comments and then replies provide evidence of frame contestation, which are discussed in terms of counter-framing by counter-movements in online social networks. This is the first comparative study of communication in social movements of Hong Kong and Taiwan.

Keywords: China, counter-framing, counter movement, Facebook, framing, Hong Kong, Occupy Central Movement, social media, social movement, Sunflower Movement, Taiwan, Umbrella Movement

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1 Senior Lecturer, Chinese Media Studies, The University of Sydney. E: joyce.nip@sydney.edu.au
2 Associate Professor, Journalism and Media Studies Centre, The University of Hong Kong. E: kwoffu@hku.hk
3 Associate Professor, College of Communication, National Chengchi University. E: yuchungc@nccu.edu.tw
Introduction
Early studies of the Internet and social movements conceived the Internet as a tool used by social movement organizations (e.g. Myers, 1994). As digital media enable online social networks, some (e.g. Bennett & Sergeberg, 2013; Castells, 2015; Shirky, 2009) have suggested that individuals could organize themselves into protest actions without, or at least with far less help from, social movement organizations. Horizontal communication that connects interactive networks of individuals and collectives—what Castells (2016) called “mass self-communication” (p. 9)—provides the communication support of “networked social movements;” personalization of the cause of political action underlies the motivation of participation (Bennett & Segerberg, 2013). While the new forms of political action are celebrated as possibly “new forms of social change” (Castells, 2015, p. xv), little attention has been paid to counter-movements, which are also enabled by digital social networking of individuals. This study investigates the actions and counter actions in the communication about the Umbrella and Sunflower Movements on Facebook, with the aim to enrich understanding about the implications of networked digital media on social activism.

Theoretical Framework
Social Networks in Social Movements
Social networks underlie the recruitment and mobilization of social movements by being the space in which individuals interact and form their motivation and identity in collective action (Melucci, 1996). What marks digitally connected social networks from their older forms is that before they formed a facilitative intermediate level of mobilization (Della Porta & Diani, 2009), now they become the sufficient mobilizing structure of new forms of social movements. Bennett and his colleagues conceive these new forms of social movements as networks that connect individuals and collectives, who share information, coordinate action, and mobilize potential supporters in the networks (Walgrave, Bennett, Van Laer, & Breunig, 2011). This study takes public pages of Facebook as “sources of network formation” (Castells, 2011) to examine the communication that flowed from these pages in two large-scaled protest movements in the Greater China region.

Framing in Social Movements
In Bennett and Segeberg’s (2013) scheme, personalization of the protest actions is central to “crowd enabled” and “organizationally enabled” social movements, both of which are driven by the logic of connective action. In these types of social movements, individuals
and collectives express, communicate, filter, further personalize, and spread their views about the cause of the political action via digital social networks on platforms like Facebook, Twitter and YouTube. Tarrow (2014) pointed out that personalization is also an important component of traditional social movements—what Bennett and Segerberg (2013) described as organizationally brokered collective action. The rich body of literature about framing in social movements, emerged since the early 1980s (Snow, 2013), directly addresses this subject.

In traditional social movements, leaders of social movement organizations/alliances strive to produce collective action frames for the movement to (1) mobilize adherents into action; (2) convert bystanders into adherents; and (3) counter the framing of antagonists and demobilize their supporters (Gamson, 2004; Snow, 2013). To do so they perform three core framing tasks: problem identification and attribution (diagnostic framing), proposal of a solution (prognosis framing), and call for action (motivational framing) (Snow & Benford, 1988). Social movement supporters play a part in producing the collective action frames by interacting with movement leaders, who articulate and elaborate the frames (Snow, 2013).

Frame Disputes, Frame Contests, and Counter-Framing

Frame disputes (Benford, 2013) occur within movements when participants resist and challenge the frame produced by social movement leaders. On the other hand, frame contests (Ryan, 1991) occur between social movements and their opponents, which could be counter-movements, contrary targets of change, the media, or bystanders. Counter-movements are protest movements that oppose the social change advocated by some initial social movements (Mottl, 1980). Counter-framing comes from opponents, and are “attempts to rebut, undermine, or neutralize a person’s or group’s myths, versions of reality, or interpretive framework” (Benford, as cited in Benford & Snow, 2000, p. 626). Despite the prolific literature on framing, the discursive processes through which frames evolve, develop, and change have been little examined (Snow, 2013). This study fills this gap by probing the process of how organizers, supporters, and opponents frame the Umbrella and Sunflower Movements in the communication flow on Facebook pages.

Conceptualization of Framing

Studies of framing in social movements typically follow the sociological conception of framing, what Cacciatore, Scheufele, and Iyengar (2016) called “emphasis framing,” as opposed to “equivalence framing.” This study follows the same line of thought.
Methodologically, this study adapts Matthes and Kohring’s (2008) proposed list of frame elements, which drew on Entman’s (1993) well-cited definition of framing (p. 52), to code the frame elements and framing task in each of the messages: (1) the theme—as the overarching frame of a text (Pan & Kosicki, 1993), equivalent to the frame element “problem definition” (Entman, 1993; Matthes & Kohring, 2008); and as elaboration of Entman’s (1993) frame element “moral evaluation”—the (2) stance toward the theme, and (3) principle of evaluation of the theme. Entman’s diagnoses and recommendation framing tasks were supplemented by other categories of (4) communicative function. Where the theme relates to an event, (5) diagnosis of the cause of the theme, (6) diagnosis of the consequence of the theme, and (7) recommendation of remedy of the theme were also coded.

**Literature Review**

Studying the 2011 Egyptian uprisings on Twitter, Meraz and Papacharissi (2013, as cited in 2016) found persistent revisions and rearticulation of the frames of messages while users filter and share messages in the network. Adapting Entman’s (1993) definition, they proposed the concept “networked framing” as “a process through which particular problem definitions, causal interpretations, moral evaluations, and/or treatment recommendations attain prominence through crowdsourcing practices” (p. 102). Networked framing is driven by ideological homophily (Meraz & Papacharissi, 2016), but Meraz (2017) also noted the existence of “partisan networked framing,” in which “politically motivated individuals…inject partisan content into ideologically opposed tweet streams” (p. 308).

Empirical studies on framing in networked social movements tend to analyze frames as products (Bashir, 2012; Harlow, 2012; Mercea & Funk, 2016). Bashir (2012) is one of the few that studied framing as a process in digital networks: he found change in the frequency of the same frames comparing leadership posts and participant comments on a Facebook page during the 2011 Egyptian uprising. Outside of social movement contexts, Nip and Fu (2016) found frame transformations comparing reposts with their source posts on the Chinese social media, Weibo.

**Research Questions**

This study asks:

1. What were the frames embedded in the posts, comments, and replies on the sampled Facebook pages, and how did they compare to each other in the Umbrella and Sunflower Movement respectively?
What were the framing tasks of the posts, comments and replies on the sampled Facebook pages, and how did they compare to each other in the Umbrella and Sunflower Movement respectively?

How did the two movements compare in each of the above?

Research Sites

The two movements were unprecedented in scale in the recent history of the two places, with the 79-day Umbrella Movement spanning September to December involving 18-20% of the adult population of Hong Kong (Lee & Chan, 2016), and the 24-day Sunflower Movement winning 48% support for its occupation of the legislature, and arousing a support rally of 500,000 people outside the presidential office on 30 March 2014 (TVBS, as cited in Ho, 2015). While both Castells (2015) and Bennett & Segeberg (2013) interpreted the new forms of political action as a sign of the loss of trust on institutional democracy in the West, the Umbrella and Sunflower Movements were struggles in two post-colonial societies in Greater China to build/protect institutional democracy against a long perceived threat of nationalization from authoritarian China. The Umbrella Movement in Hong Kong was prompted by a restrictive blueprint for electoral arrangements dictated by its sovereign, China, while the Sunflower Movement in Taiwan was triggered by the passage of a controversial trade agreement with China in the legislature without allowing legislative deliberation. Bonded by a conflictual solidarity and an “un-Chinese” identity encompassing heterogeneous local identities, the movements built on collective grievances and called upon a “movement network” (Melucci, 1996) of civil society organizations and individuals (Beckershoff, 2017; Ma, 2009) that had cooperated and accumulated over previous years. In Hong Kong, political activism had prompted the hybrid regime in the post-colonial era—comprising the central government of China, the local government of Hong Kong, and elites supportive of both governments—to activate dormant and form new pro-regime social organizations since the early 2000s, which were then aligned to form the “blue ribbon” movement against the long-planned “yellow ribbon” Occupy Central Movement (Cheng, 2016). With social media blurring the boundary between activists and concerned citizens (Bennett & Segerberg, 2013), individuals without previous connection to the movement networks were able to participate online discursively or recruited to offline action of the movements (Hsiao & Yang, 2018). On the other hand, the counter movement was also able to draw participants online. In the two movements, a range of information and communication media were used (Lee, So, & Leung, 2015; Lin, 2014). To gain understanding about the
contestation over the framing process in them, this study focuses on Facebook, the most used social media in Taiwan and Hong Kong at the time of the movements (adoption rate in TW: 65%; HK 63%) (“Facebook penetration rate,” 2014; “Hong Kong has,” 2014).

**Methods**

Manual content analysis was conducted to sampled messages published on selected public Facebook pages. The same two-stage (first page then message) sampling strategy was applied to the two movements. Qualitative data came from indepth reading of the sampled and other messages published on the selected Facebook pages during the movements.

**Facebook Page Sampling**

Five public pages on Facebook that expressed explicit support or opposition to the movement and between them expressing a diversity of political positions were selected from each place as seeds to snowball other relevant pages using the criterion of sharing at least three unique posts from a seed page during the movement periods (March 1 – April 30, 2014 in Taiwan; July 1 - December 20, 2014 in Hong Kong). The snowballed pages—not limited to those established specifically for the movements—were included if they originated from Hong Kong/Taiwan judged according to the profile page description and the country information of the majority of its fans provided by the Facebook Insights API and after manually checked that they published abundantly about the occupations. Six rounds of snowballing identified 1,397 pages in Hong Kong and 57 pages in Taiwan, each with a complete record of timeline data, including status update, photos, and links shared, for the movement period.

Purposive sampling was then conducted among the included pages in each place with the target to identify four (two pro- and two anti-movement) pages each from three types of users: Organizations, Media, and Individuals (Table 1). Consideration was given to the influence of the page in the movements judged by the strength of the tie between the page and other pages as found in network analysis, as well as the diversity between the pages. Eventually, pages that took a neutral position in the movements were included to form a neutral/anti-movement position in each of the user types as few pages that opposed the two movements were found particularly in Taiwan. Grouping of neutral with anti-movement pages was considered justifiable because not challenging the establishment has the effect of maintaining the status quo.
Table 1. *Target* sample of pages in each place - one page in each cell

|                | Organization | Media         | Individual      |
|----------------|--------------|---------------|-----------------|
| Pro-movement   | offline      | online only   | politician      |
| N/anti-movement| offline      | online only   | non-politician  |

Differentiating the movements into three phases based on the turn of events, with one week added on from the date of retreat (Table 2), the purposive sampling aimed at pages that had posted both original and shared posts in each of the phases. Pages were selected into the sample based on (1) high number of “likes” to the page, (2) high number of original posts published, and (3) high number of posts shared by the page.

Table 2. Three phases of the Sunflower and Umbrella Movements

|       | Government decision | Police intervention | Retreat                  |
|-------|---------------------|---------------------|--------------------------|
| TW    | Mar 17 (00:00) - Mar 24 | Mar 24 (02:00) - Apr 7  | Apr 7 (20:00) - Apr 17 (23:59) |
| HK    | Aug 31 (00:00) - Sep 28 | Sep 28 (18:00) - Nov 25 | Nov 25 (15:00) - Dec 22 (23:59) |

*Facebook Message Sampling*

On each of the 12 target sample pages, the most popular publicly viewable posts, comments and replies were sampled following a strategy (Table 3). Where the number of “likes” was the same among “comments without reply,” the comment published at a time closer to the time of publication of the post was selected. The same logic was applied to the sampling of replies. This strategy would draw a maximum of 15 comments and replies from each post, yielding a total of 144 messages.

Table 3. Message sampling strategy *in each phase* of each movement

|                     |                      |
|---------------------|----------------------|
| Each page           | • 2 original posts (most comments)  
|                     | • 2 shared posts (most comments)   |
| Each post           | • 5 comments with reply (most replies)   
|                     | • 5 comments without reply (most “likes”)  |
| Each comment with reply | • 5 replies (most “likes”) |

Eventually, some of the pages aimed at were not found. The resulting page sample consists of 10 pages each in Hong Kong and Taiwan. The final sample consists of 2,388 messages—1,389 from Hong Kong and 999 from Taiwan (Table 4), almost exclusively authored in Chinese.
Table 4. Sample used in the study

|                     | Original post | Shared post | Comment w reply | Comment w/o reply | Reply | Total |
|---------------------|---------------|-------------|-----------------|-------------------|-------|-------|
| **HK**              |               |             |                 |                   |       |       |
| **Pro-movement**    |               |             |                 |                   |       |       |
| *Apple Daily*, Hong Kong (offline media) | 6 | 6 | 55 | 60 | 55 | 182 |
| *Passion Times* (online media) | 6 | 6 | 53 | 60 | 53 | 178 |
| Scholarism (offline orgn) | 6 | 6 | 55 | 60 | 56 | 183 |
| Age of Resistance (online orgn) | 6 | 6 | 11 | 57 | 12 | 92 |
| Leung Kwok Hung (politician) | 6 | 6 | 54 | 60 | 55 | 181 |
| Kengo (non-politician) | 6 | 6 | 51 | 60 | 52 | 175 |
| **Neutral/anti-movement** | | | | | | |
| *Ming Pao* (offline media) (neutral) | 6 | 2 | 33 | 40 | 33 | 114 |
| *Speak out HK* (online media) (anti-) | 6 | 0 | 10 | 30 | 10 | 56 |
| Silent Majority (offline orgn) (anti-) | 6 | 0 | 10 | 30 | 10 | 56 |
| Salute to HK Police (online orgn) (anti-) | 6 | 6 | 50 | 60 | 50 | 172 |
| **Subtotal of HK** | 60 | 44 | 382 | 517 | 386 | 1389 |
| **TW**              |               |             |                 |                   |       |       |
| **Pro-movement**    |               |             |                 |                   |       |       |
| *Apple Daily*, Taiwan (offline media) | 6 | 3 | 45 | 45 | 43 | 142 |
| *News E Forum* (online media) | 6 | 5 | 29 | 47 | 29 | 116 |
| Black Island Nation Youth Front (online orgn) | 6 | 6 | 57 | 60 | 55 | 184 |
| nylon407 (offline orgn) | 6 | 5 | 15 | 55 | 15 | 96 |
| Tsai Ing-wen (politician) | 6 | 0 | 30 | 30 | 30 | 96 |
| CHTHONIC (non-politician) | 6 | 2 | 27 | 40 | 27 | 102 |
| **Neutral/anti-movement** | | | | | | |
| PNN (offline media) (neutral) | 6 | 2 | 13 | 39 | 11 | 71 |
| Kuomingtang Kaohsiung (offline orgn) (anti-) | 2 | 1 | 3 | 12 | 3 | 21 |
| Indefinite support of the Police (online orgn) (anti) | 2 | 0 | 10 | 10 | 10 | 32 |
| Huang Wei-Han (non-politician) (neutral) | 6 | 3 | 44 | 45 | 41 | 139 |
| **Subtotal of TW** | 52 | 27 | 273 | 383 | 264 | 999 |
| **Total**          | 112 | 71 | 655 | 900 | 650 | 2388 |

**Message Coding**

Rounds of training were provided to two coders in each place recruited among local university students alongside with rounds of trial coding, which informed the adjustment of the coding scheme—drafted bilingually in Chinese and English—before pilot coding started using the final coding scheme.

The pilot sample of messages (on each page: one original post, one shared post, and up to 15 comments and replies to each post—a maximum 90 in each place) was drawn from three sampled pages each from Hong Kong (*Ming Pao*, Scholarism, and Kengo) and Taiwan.
(Apple Daily Taiwan, Black Island Nation Youth Front, and Huang Wei-Han). The Kappa coefficient for four questions: communicative function, theme, stance toward theme, and principle of evaluation of theme in both places exceeded 0.7. High inter-coder agreement but low kappa coefficient was found in three questions: “diagnosis of cause,” “diagnosis of consequence,” and “recommendation of remedy” as they were coded only if the theme related to an event; the coding of “nil” generated highly unbalanced marginal distribution of the items (Feinstein & Cicchetti, 1990). The pilot sample items would not form part of the final data sample in the proper coding.

**Data Analysis**

To test whether the percentages of various communicative functions and frames were significantly different from each other within each place, Chi-square goodness of fit test was applied to a permutation of pairs of the communicative functions and frames. To test the independence between the coded dimension and location, and between the coded dimension and the message type in each place, the Chi-square test was also applied.

Content analysis of social media messages is more difficult than other text genres due to the lack of normative length, coherent structure, or uniform style. In this study, the very large variety of themes and the relatively small sample for each message type (post, comment, or reply) makes cluster analysis, recommended by Matthes and Kohring (2008), an unfruitful method for identifying the holistic frames. Qualitative reading of the messages was used instead.

**Results**

Quantitative analysis of frame elements found that despite the causes of the movements, the theme of the sampled Facebook posts did not focus on the Chinese government or politics/democracy. Despite grouping a small number of neutral pages with anti-movement pages, the stance toward the theme expressed in the posts of the group was generally consistent with expectation about the anti-movement; the expectation on stance was also held on the pro-movement pages. Qualitative reading provided additional evidence about the stance of anti-movement pages. Both groups of pages applied similar principles of evaluation of the theme. Diagnosis of cause, consequence, or recommendation of action was minimal, while information giving stood out as the most prominent communicative function of the posts.
Frame Elements of Post

Theme

In both places, pro- and neutral/anti-movement pages posted the most about organizers/supporters and the Police (Table 5). The theme Police was much more prevalent in Hong Kong than Taiwan, probably because of the many occasions of police intervention into the continual occupation of several city centres.

Table 5. Theme by Message type and Position in Hong Kong and Taiwan

| Theme                  | HK                  |                  | Neutral/anti-movement pages |                  |
|------------------------|---------------------|------------------|-----------------------------|------------------|
|                        | Pro-movement pages  |                  | Total                       |                  |
|                        | Post    | Comment | Reply | Post    | Comment | Reply | Total |
| Chinese government     | 2       | 34.4%   | 14.9% | 50.8%   | 5.1%    | 0.0%  | 0.0%  | 14.9% |
| Civilian opposition    | 4       | 6.8%    | 12.0% | 8.2%    | 9.4%    | 14.8% | 12.6% | 13.8% |
| Government/officials   | 12      | 111.0%  | 34.0% | 157.0%  | 15.9%   | 6.3%  | 5.7%  | 9.3%  |
| Organisers/supporters  | 21      | 164.0%  | 36.0% | 221.0%  | 22.4%   | 37.5% | 40.3% | 36.9% |
| Police                 | 20      | 139.0%  | 51.0% | 210.0%  | 20.0%   | 31.3% | 21.3% | 19.1% |
| Politics/democracy     | 1       | 14.0%   | 0.0%  | 0.9%    | 0.0%    | 1.5%  | 3.9%  | 2.0%  |
|                        | TW                  |                  | Neutral/anti-movement pages |                  |
|                        | Pro-movement pages  |                  | Total                       |                  |
|                        | Post    | Comment | Reply | Post    | Comment | Reply | Total |
| Chinese government     | 0       | 9.0%    | 4.0%  | 13.0%   | 0.0%    | 0.0%  | 0.0%  | 1.0%  |
| Civilian opposition    | 2       | 28.0%   | 19.0% | 49.0%   | 6.7%    | 4.5%  | 11.4% | 10.6% |
| Government/officials   | 3#      | 102.0%  | 43.0% | 148.0%  | 6.7%    | 4.5%  | 11.4% | 10.6% |
| Organisers/supporters  | 35**    | 193.0%  | 53.0% | 281.0%  | 50.0%   | 28.4% | 36.9% | 32.3% |
| Police                 | 8       | 36.0%   | 12.0% | 56.0%   | 7.6%    | 14.8% | 7.7%  | 13.7% |
| Politics/democracy     | 3**     | 2#      | 3.0%  | 8.0%    | 0.0%    | 1.1%  | 0.0%  | 0.8%  |

Percentage refers to % within message type except in the Total columns.
* denotes adjusted residual of the cell is 2 or above.
** denotes adjusted residual of the cell is 3 or above.
# denotes adjusted residual of the cell is -2 or below.
## denotes adjusted residual of the cell is -3 or below.
The above adjusted residuals of chi-square test in the Total columns refer to the cross-tabs between theme and position of the page.
The above adjusted residuals of chi-square test in other columns refer to the cross-tabs between theme and message type, with the position of the page and place controlled.
The themes “News media,” “The public,” “Oneself,” “Others” and “Irrelevant” themes are omitted.
**Stance toward Theme**

Posts on pro-movement pages tended to support the Organizers, oppose the Police, Governmentofficials, and the movement’s Civilian opposition, whereas posts on Neutralanti-movement pages behaved conversely (Tables 6 & 7).

Table 6. Stance x Theme x Message type x Position in Hong Kong

| Theme                  | Stance | HK Pro-movement pages | Neutral/anti-movement pages |
|------------------------|--------|------------------------|----------------------------|
|                        |        | post | comment | reply | Total | post | comment | reply | Total |
| Chinese government     | O      | 1   | 50.0%   | 32    | 94.1% | 12   | 85.7%   | 45** | 90.0%|
|                        | S      | 0   | 1      | 2.9%  | 0     | 1#    | 2.0%    | 0    | 0    |
| Civilian opposition    | O      | 2   | 50.0%   | 34    | 79.1% | 31   | 91.2%   | 67** | 82.7%|
|                        | S      | 1   | 25.0%   | 2.3%  | 1     | 3#    | 3.7%    | 2*   | 6    |
| Governmentofficials   | O      | 3##  | 25.0%   | 87    | 78.4% | 30   | 88.2%   | 120** | 76.4%|
|                        | S      | 1   | 8.3%    | 10    | 9.0%  | 11##  | 7.0%    | 0    | 1    |
| Organiserssupporters  | O      | 6   | 28.6%   | 75    | 45.7% | 15   | 41.7%   | 96##  | 43.4%|
|                        | S      | 10  | 47.6%   | 71    | 43.3% | 17   | 47.2%   | 98**  | 44.3%|
| Police                 | O      | 10  | 50.0%   | 88    | 63.3% | 31   | 60.8%   | 129   | 61.4%|
|                        | S      | 0   | 14.4%   | 20    | 7.8%  | 24#   | 11.4%   | 70    | 3.6% |

Table 7. Stance x Theme x Message type x Position in Taiwan

| Theme                  | Stance | TW Pro-movement pages | Neutral/anti-movement pages |
|------------------------|--------|------------------------|----------------------------|
|                        |        | post | comment | reply | Total | post | comment | reply | Total |
| Chinese government     | O      | 0   | 100.0%  | 9     | 100.0%| 3    | 75.0%   | 12** | 92.3%|
|                        | S      | 0   | 0      | 0     | 0#    | 0    | 0      | 0    | 0    |
| Civilian opposition    | O      | 2   | 100.0%  | 15    | 53.6% | 11   | 57.9%   | 28*  | 57.1%|
|                        | S      | 0   | 3.6%   | 1     | 10.5% | 3##  | 6.1%    | 0    | 0    |
| Governmentofficials   | O      | 3   | 100.0%  | 82*   | 80.4% | 276  | 62.8%   | 112** | 75.7%|
|                        | S      | 0   | 5.9%   | 6     | 7.0%  | 9##  | 6.1%    | 0    | 5.9% |
| Organiserssupporters  | O      | 1#  | 2.9%   | 41    | 21.2% | 11   | 20.8%   | 53##  | 18.9%|
|                        | S      | 19  | 54.3%  | 115   | 59.6% | 23   | 43.4%   | 157** | 55.9%|
| Police                 | O      | 4   | 50.0%   | 25    | 69.4% | 7    | 58.3%   | 36**  | 64.3%|
|                        | S      | 0   | 8.3%   | 3     | 8.3%  | 4##  | 7.1%    | 60%   | 30.8%|

In Tables 6 and 7:
O = opposing stance to the theme; S = supportive stance to the theme
Percentage refers to % within the same message type of the theme except in the Total columns.
The adjusted residuals of chi-square test in the Total columns refer to the cross-tabs between stance and theme of all message types together, with the position of the page and place controlled. The above adjusted residuals of chi-square test in other columns refer to the cross-tabs between stance and message type, with the theme, position of the page, and place controlled. The themes “News media,” “Oneself,” “Others,” “Politics/democracy,” “The public,” and “Irrelevant,” as well as Neutral and unidentifiable stances are omitted.

Principle of Evaluation of Theme

Utility/performance/quality/ability was the most often used principle in evaluating the theme in the posts of both pro- and neutral/anti-movement pages in both places (HK: pro-movement 45.8%, N/anti-movement 34.4%; TW: pro-movement 15.8%, N/anti 36.4%). The principle was manifested as judging the theme against an expected standard of performance. Values/morals/consciousness was the second, but far less used, principle (HK: pro-movement 11.1%, N/anti-movement 12.5%; TW: pro-movement 14.0%, N/anti 0%).

In Taiwan, making no evaluation was more common in posts than applying any principle of evaluation (pro-movement 64.9%, N/anti-movement 59.1%). In Hong Kong, posts making no evaluation (pro-movement 25.0%, N/anti-movement 15.6%) was more common than the Values principle on either side of the movement.

Framing Tasks of Post

Communicative Function

In both movements, Information giving (HK: 47.1%; TW: 43.0%) was the most prevalent, and Analysis giving the second (HK: 12.5%; TW: 32.9%) most prevalent communicative function of posts. Action mobilization, on the other hand, was minimal among all message types of both movements (Table 8), although information about future action might be mobilizing information.
### Table 8. Communicative function by Message type in Hong Kong and Taiwan

| Communicative function | HK Post | Cment | Reply | Total | TW Post | Cment | Reply | Total |
|------------------------|---------|-------|-------|-------|---------|-------|-------|-------|
| Action mobilization    | 2       | 6     | 1     | 9     | 2       | 7     | 1     | 10    |
|                        | 1.9%    | .7%   | .3%   | .6%   | 2.5%    | 1.1%  | .4%   | 1.0%  |
| Action suggestion      | 12**    | 43    | 8#    | 63##  | 12      | 78    | 20#   | 110** |
|                        | 11.5%   | 4.8%  | 2.2%  | 4.5%  | 15.2%   | 11.9% | 7.6%  | 11.0% |
| Analysis giving        | 13##    | 367   | 180*  | 560## | 26##    | 386   | 174*  | 586** |
|                        | 12.5%   | 41.0% | 46.6% | 40.4% | 32.9%   | 58.8% | 65.9% | 58.7% |
| Analysis seeking       | 0       | 14    | 7     | 21    | 0       | 7     | 2     | 9     |
|                        | 0%      | 1.6%  | 1.8%  | 1.5%  | 0%      | 1.1%  | 0.8%  | 0.9%  |
| Emotional expression   | 11##    | 321** | 120   | 452** | 0#      | 33    | 16    | 49##  |
|                        | 10.6%   | 35.8% | 31.1% | 32.6% | 0%      | 5.0%  | 6.1%  | 4.9%  |
| Emotional support giving| 4      | 49*   | 9#    | 62##  | 4       | 82**  | 15#   | 101** |
|                        | 3.8%    | 5.5%  | 2.3%  | 4.5%  | 5.1%    | 12.5% | 5.7%  | 10.1% |
| Emotional support seeking| 9##   | 17    | 1#    | 27**  | 0       | 0     | 0     | 0###  |
|                        | 8.7%    | 1.9%  | 0.3%  | 1.9%  | 0%      | 0%    | 0%    | 0%    |
| Information giving     | 49**    | 23##  | 13#   | 85    | 34##    | 29##  | 16    | 79    |
|                        | 47.1%   | 2.6%  | 3.4%  | 6.1%  | 43.0%   | 4.4%  | 6.1%  | 7.9%  |
| Information seeking    | 1       | 2#    | 4     | 7     | 1       | 7     | 4     | 12    |
|                        | 1.0%    | 0.2%  | 1.0%  | 0.5%  | 1.3%    | 1.1%  | 1.5%  | 1.2%  |

Percentage refers to % within message type except in the Total columns.
* denotes adjusted residual of the cell is 2 or above.
** denotes adjusted residual of the cell is 3 or above.
# denotes adjusted residual of the cell is -2 or below.
## denotes adjusted residual of the cell is -3 or below.
The above adjusted residuals of chi-square test in the Total columns refer to the cross-tabs between communicative function and place.
The above adjusted residuals of chi-square test in other columns refer to the cross-tabs between communicative function and message type, with the place controlled.
The rows “Irrelevant,” “Other” and “No identifiable function” are omitted.

**Diagnosis of Cause, Consequences; Recommendation of Remedy in Post**

Diagnostic and prognostic framing hardly existed in the posts in either of the movements (No diagnosis of cause: HK 92.4%, TW 99.7%; no diagnosis of consequence: HK 91.8%, TW 99.4%; no recommendation of remedy: HK 93.1%, TW 99.5%).

**Change of Framing in Communication Flow**

As Tables 5 to 8 above indicate, some frame elements and framing tasks became more prominent among comments and replies compared to posts, suggesting that frames shifted in the flow of communication.

**Change in Theme**

In the Hong Kong movement, Organizers and Police remained as the top two themes in comments as in posts on both sides of the movement. Police became a more popular theme...
than Organizers among replies on pro-movement pages, but a less popular theme than Civilian Opposition on neutral/anti-movement pages (Table 5).

In Taiwan, Organizers remained as the top theme across posts, comments, and replies, but Government/officials overtook Police as the second popular theme in comments and replies on both sides of the movement (Table 5).

**Change in Stance toward Theme**

In Hong Kong, a higher percentage of comments and replies than posts expressed an Opposing stance toward Government on both pro- and neutral/anti-movement pages, and toward Civilian opposition on neutral/anti-movement pages. Of the three message types together, 81.0% show an Opposing stance toward Government and 70.9% toward the Civilian opposition on neutral/anti-movement pages in Hong Kong (Table 6).

In Taiwan, a higher percentage of comments and replies than posts on pro-movement pages showed an Opposing stance toward the Organizers, but a lower percentage of replies than posts or comments showed an Opposing stance toward Government. On neutral/anti-movement pages, an Opposing stance toward Civilian opposition increased in comments and replies compared to posts (Table 7).

**No Change in Principle of Evaluation**

In both places, Utility remained as the top principle of evaluation among comments (HK: pro- 34.4%, N/anti- 30.0%; TW: pro- 35.2%, N/anti- 64.2%) and replies (HK: pro-24.7%, N/anti- 21.4%; TW: pro- 30.2%, N/anti- 60.0%) on both sides of the movement, although in Taiwan No evaluation remained higher in all three types of messages on pro-movement pages (comments 50.6%, replies 58.3%). In Hong Kong No evaluation decreased among comments (9.9%) but increased among replies (23.3%) on neutral/anti-movement pages, whereas in Taiwan, No evaluation decreased among comments on pages of both sides of the movement (pro- 50.6%, N/anti 25.6%).

**Change in Communicative Function**

Analysis/interpretation/opinion giving was the most common communicative function of comments and replies, suggesting that comments and replies that responded to a post did not necessarily take on the same communicative function as the post (Table 5). Comparing the two movements, Emotional expression, which was more found among posts in Hong Kong than in Taiwan, became much more prominent among comments and replies in Hong
Kong, while remaining quite negligible in Taiwan. On the other hand, Analysis giving remained much higher in Taiwan than in Hong Kong among the three message types (Table 8). The change of communicative function from posts to comments and replies followed the same pattern on pro- and neutral/anti-movement pages in the two places.

**Holistic Frames**

The quantitative results reported above, derived from the most discussed public messages from the most influential and diverse of the public pages about the movements on Facebook, portray an overall picture that Organizers/supporters of the movement, and the Police were the two most popular themes. They were mostly evaluated by a stance expected of the political position of the page, and most often according to the Utility/performance/quality/ability principle where any principle was applied. Qualitative reading of messages identified further details about the examined frame elements, which could be integrated into holistic frames. In both Hong Kong and Taiwan, a competing pair of intertwined holistic frames was the most prominent:

1. To the pro-movement side:
   a) The protests represented citizens’ democratic right/justified action to express their views.
   b) The government failed its duty to allow deliberation about the trade agreement with China in Taiwan/address citizens’ aspiration for universal suffrage in Hong Kong.
   c) Movement organizers/supporters were respectable and idealistic people acting for the interest of society.
   d) The police suppressed the protest with violence.

2. To the anti-movement side:
   a) The protests were an illegal act that violated the law/constitution, disrupted public order and harmed the interest of society.
   b) The opposition party failed its role in deliberating the trade agreement in Taiwan; the movement organizers created an issue out of nothing in Hong Kong.
   c) Movement organizers/supporters were violent mobs who fished for self-gain.
   d) The police were defenders of law and order.

**Changes of Holistic Frame in Communication Flow**

More than the theme and communicative function, change in the stance toward the theme in comments and replies, compared to the stance of the post, reveals the change in
framing in the communication flow the most clearly. Such change is clear evidence of frame contestation between the movement and counter movement.

In the Hong Kong sample, the post published by pro-movement pages that drew the most public comments (n=3748) was published by the newspaper Apple Daily, Hong Kong at 05:20 on September 29, 2014. It shows a government-produced video, in which the Chief Executive of Hong Kong, Leung Chun-ying, reads out a statement, denying rumours that China’s army has intervened in the protests, or that the police has shot at the protesters. Calling for the end of the street occupation, Leung says the stable development of Hong Kong depends on peaceful abiding by the law, that the government hopes to work with all sectors in society to restore social order as soon as possible.

Despite Apple Daily, Hong Kong being a pro-movement page, the one-sided government voice expresses an opposing stance toward the organizers/supporters of the movement, applying the legal/public order principle of evaluation. It diagnoses movement organizers and participants as the cause of the occupation, resulting in “overall interest harmed,” and recommends “organizers’/participants’ action” as remedy. The comments drawn by the post, however, overwhelmingly shift the theme to Leung himself and express contempt for him and what he said, indirectly expressing support for the movement. The most popular comment is a spoof, showing a photograph taken two months earlier of Leung’s wife lamenting the media’s reports of their daughter’s self-harm, superimposed with the caption “Leung Chun-ying is not suited to the Chief Executive job. Step down right away!”.* The comment, in turn, drew supportive but also confronting replies—indicating contestation between supporters and opponents of the movement. Examples of replies that disagree with the comment are: “I don’t support unreasonable action.,” and “Would you like to be the Chief Executive?” Another popular comment on the post counters Leung’s factual claim: “The police has not shot at the people? Fuck your mother Leung Chun-ying.” Some supportive replies prompted by this comment uploaded a photograph of about a dozen Hong Kong policemen dressed in armour in an occupation location with one of them taking aim with his rifle.

The post about the Umbrella Movement that drew the most public comments (n=6902) was published by an anti-movement page, Salute to Hong Kong Police, on the same day after the above Apple Daily post. It expresses a supportive stance toward the police using legal/public order as the principle of evaluation:

Police friends on the scene wrote this: …. My colleagues were pushed, poked, spat on, and cursed, and injured by hard objects deliberately thrown from flyovers…. The
media only report one-sidedly what the citizens wish to read, ….. Occupying the streets has become reasonable and legal. We are taken as demons because we try to restore public order…. Seven of the 10 sampled comments made to the post express gratitude or sympathy toward the police. One, however, poses a challenge: “It is ridiculous. I wear a T-shirt and you wear an armour.” The comment, in turn, drew a challenging reply: “There must be a reason. Would you be beaten up if you only rally peacefully? Don’t speak as if you were law-abiding....”. One other comment disputes the frame of the post without opposing it: “The fault does not lie with the police, nor with the citizens. It lies with the government! Support to taking to the streets, support also to the police!”

One of the sampled posts on pro-movement pages, titled “a hunger strike manifesto,” published on the page of Scholarsim (one of the lead student organizations of the occupation) on December 2, exudes an idealism behind the Umbrella Movement:

…I am not afraid that others laugh about my dreams. I am more afraid that I hear the shattering sound of my dreams when I grow up. I am afraid that I do not have any dream. The troubled time puts upon us a responsibility. Today, we are willing to pay the price to shoulder this responsibility…We shall take back our future.

The overwhelming majority of the comments on the post state support for the movement and express concern for the students, but advise against hunger striking, believing that the government would be too cruel to yield, the unsupportive citizens too materialistic to be awakened, but the health of the hunger strikers would be ruined and the movement weakened. A tiny minority of the comments indeed contest the idealistic framing of the movement organizer in the post. For example: “Moron going on hunger strike? You should better just set yourself on fire, damn you.” One of the sampled comments counter-frames the hunger strike as an effort of the student leader to win political capital and fame.

In Taiwan, the post that fetched the most public comments (n=8657) was published on the page of the pro-movement individual Tsai Ing-wen (leader of the opposition Democratic Progressive Party (DPP) who was to be elected Taiwan president in 2016) on March 24, 2014. It expresses an Opposing stance toward the Government/Government official, indirectly supporting the movement, using Utility/performance/quality/ability as the principle of evaluation:

… A president who refuses to admit his wrongs, who cannot reflect upon himself is incapable of handling this crisis. He would only escalate antagonism…. His destruction of the constitutional system, and hence the trust of the people in the
government far surpasses the damage created by the physical confrontation of the students…

However, the sampled comments, except one, drawn by the post all refocus the theme to criticize the opposition party or Tsai herself, demonstrating a neutral position toward the movement. The one that aroused the most replies and likes says:

Chair Tsai, If I may: I think the DPP has not made any improvement in the last few decades. Should it also reflect upon itself? If our country is mired in the fierce fights between the two parties, these innocent kids in the legislative chamber will be the only ones who come forward. My advice may taste like bitter medicine to the mouth, but I hope Chair Tsai would give it some thought.

The second most publicly commented upon (n=4420) post in Taiwan was published by the page of the anti-movement online organization, Indefinite Support of the Police (ISP), on April 15, 2014, after the retreat of the movement. The long post, speaking seemingly from an official position, declares support to the dispersal of the protesters by the Taipei City Mayor and the police on April 11:

…we hope that any social movement in the future should take reference from the peaceful ending of the rally on the Ketagalan Boulevard on 30 March [which drew an estimated 500,000 participants]. We call on event leaders and participants from all sectors be considerate of the police….

It then counters a news report that queries the “accidental” timing of the formation of the ISP Facebook page in the morning of the day when police dispersed the occupiers. The post received mainly supportive comments, which insisted that those who suggested their organization was not genuine was smearing them.

The third most popular post (comment count=3738) in the sample of the Sunflower Movement, published on March 24 by CTHTHONIC, a heavy metal group known mainly by its lead singer, Freddy Lim (and hence classified as an individual’s page), carries an English title “Taiwanese police even beaten [sic!] up the doctors in first-aid station in the protest.” Lim reports in the post, in Chinese: “Last night, we helped to send in a doctor to help an injured policeman. But the police are even beating up the doctors now that the government has decided to suppress the unarmed protesters…” The post includes the record of a speech made by the medical team, which describes the students’ injuries caused by batons, shields, and water cannons used by police and riot squads. A photograph showing a bleeding man being treated, with the caption “Medical team treats the injured” is also included.
Four of the five sampled comments to the post were supportive of the movement: One says s/he shed tears upon seeing the injured in a protest location. A second one cites the trial of a guard of the Berlin Wall who shot dead a youth who climbed the pre-demolition Wall and suggests that the policemen should be guided by their conscience in following orders. Another comment shifts the theme to the movement organizers/supporters, and says those who believe the protesting students are a violent mob have been deceived by the news media because s/he saw upon visiting one of the protest locations that the occupation was better organized than the government-run new year count-down event. The fourth supportive comment was made by a self-claimed Hongkonger, who compares the Taiwan president to the authoritarian mainland Chinese ruler. The opposing comment, however, points out that the injured person in the photograph is neither a doctor nor a student (although the caption did not claim so). A lot of the less liked comments followed this frame, challenging whether the injured were doctors or students, and demanding apology from the poster for spreading a rumour.

Discussion and Conclusion

Comparing the Umbrella and SunflowerMovements

The results suggest similarities in the communicative function for which Facebook pages were used in the two movements: Pro-movement and neutral/anti-movement pages in both places posted the most to give information, while comments on posts and replies to the comments most often provided analysis about the themes. Analysis provision was more common in Taiwan than Hong Kong among all three types of messages. Emotional expression was more frequent in Hong Kong, more so among comments than posts but which did not escalate among replies and remained second to analysis provision as a communicative function of comments and replies. Much less evaluation of the theme was observed in all types of messages in Taiwan than Hong Kong. The extensive function of information giving detected among posts in the two movements is understandable as the public nature makes them ill-suited for discussion or planning among the movement organizers.

The curse/swear language, filled with hatred and violence, found in some of the comments and replies in Hong Kong, was typical of the emotional expression in the Umbrella Movement. In contrast, the comments/replies in Taiwan usually remained polite and reasonable even when they countered the post/comment. The different levels of emotional expression in the two movements is explainable by the different opportunity structure of the two movements. China’s sponsorship of social organizations in Hong Kong to counter the
pro-democracy movement means that the incivility tacitly encouraged by the Chinese state (Jiang & Esarey, 2018), which has influenced the Internet culture in Hong Kong, was displayed in the emotional antagonism between the polarized resisters and defenders of China’s control. In comparison, China’s influence in Taiwan was limited, and a strong counter movement did not exist there at the time, leaving social media a space of dialogue for the Taiwan people. The preservation of traditional Chinese virtues, engineered by a policy since the Republic of China government moved to Taiwan after losing the civil war with Communist China in 1949, might also explain greater politeness in the Facebook messages in the Taiwan movement.

The Facebook page sampling process revealed that the opposition of the two movements, especially in Taiwan, ran fewer public pages than the movements. Frame contestation in the communication flow, clearly shown in the change of stance toward the themes, shows that the social network supportive of the movement in Hong Kong was also stronger than the counter movement. Yet even in Taiwan, countering comments and replies made on pro- and neutral/anti-movement pages reframed the stance and shifted the theme of certain messages. This could have come from private individual voices, which had been active on Taiwan’s Facebook before the movement.

The mechanism of unilateral following on public Facebook pages opens them to infiltration by opponents, making it possible that resource-rich counter-movements can overrun a movement. This did not happen in the Umbrella Movement, but the movement failed to bring about greater democratization of the political system in the territory. In Taiwan, the democratically elected government responded to the demands of the Sunflower Movement and stalled the trade agreement with China.

The contrast between the idealism of the organizers of the Umbrella Movement and the ignoble emotions vented by many of the comments against the Chief Executive’s video provides clear evidence that personal framing by supporters of the movement could be very different from that of the movement organizers. This observation is consistent with the finding that digital media accentuated the decentralization of the Umbrella Movement in Hong Kong (Lee & Chan, 2018).

**Power Battle in Facebook Communication Networks**

If social movements are processes of counter-power, then counter-movements are exercises of power maintenance by dominant institutions. Following Castells’ (2016) concepts, counter comments and replies made publicly in the online networks of a social
movement are efforts to undermine the persuasive power of the movement while challenging the network-making power of the movement network. The existence of digital counter-movements calls for full consideration of contesting forces online and redress of optimism about the facilitation of digital communication technologies on social movements.

This study offers a rare view about the battle between counter-power and power at the micro-level of social movement framing on Facebook. The limited study in this area so far has only focused on Twitter—in networked framing (Meraz & Papacharissi, 2016) and framing contest (Meraz, 2017). Unlike Twitter, which supports user networking around the hashtag by subscription, Facebook users rely on “following” as the mechanism of social network formation where public pages are involved. Since the majority of Facebook users set their messages to private (Wasserman, 2013), those who leave their messages public—except the small percentage who did not manage their privacy settings (Protalinski, 2012)—would have done so by choice expectedly with the goal of supporting or opposing the movement. Where a comment countered a post, the commenter would have most likely followed the page not because of liking but for strategic reason of monitoring the other side of the movement. This logic of network formation around a page cannot be explained by the principle of homophily of ideology, as Meraz & Papacharissi (2016) suggested. A reply that countered a comment could be made by one of such strategic followers or a friend of other Facebook users who might or might not support the page but had shared a post or his/her own comment on a post. In any case, making a comment or reply publicly is an act of public participation.

Limitations of the Study

Due to the small count in some of the cells in the crosstab tables, caution needs to be exercised in interpreting the transformation of individual frame elements in the communication flow. However, the quantitative and qualitative data together have identified the most prominent frames and sketched the back-and-forth contestation in the framing process of the two movements in the social networks around the Facebook pages.

Note

* Except stated otherwise, all direct quotations are translations from Chinese by the first author.
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References

Bashir, M. (2012). Framing an Online Social Movement: How Do the Leadership and Participants of the Egyptian 6th of April Youth Movement Frame their Facebook Activism. International Review of Information Ethics, 18, 71-83.

Beckershoff, A. (2017). The Sunflower Movement: Origins, structures, and strategies of Taiwan’s resistance against the ‘Black Box’. In D. Fell (Ed.). Taiwan's Social Movements under Ma Ying-jeou (pp. 113-133). Routledge.

Benford, R. D., & Snow, D. A. (2000). Framing processes and social movements: An overview and assessment. Annual review of sociology, 26(1), 611-639.

Benford, R. D. (2013). Frame disputes. In D.A. Snow, D. della Porta, B. Klandermans, & D. McAdam (Eds.). The Wiley-Blackwell encyclopedia of social and political movements. Blackwell Publishing Ltd.

Bennett, W. L., & Segerberg, A. (2013). The logic of connective action: Digital media and the personalization of contentious politics. Cambridge University Press.

Cacciatore, M. A., Scheufele, D. A., & Iyengar, S. (2016). The end of framing as we know it… and the future of media effects. Mass Communication and Society, 19(1), 7-23.

Castells, M. (2011). The rise of the network society: The information age: Economy, society, and culture (Vol. 1). John Wiley & Sons.

Castells, M. (2015). Networks of outrage and hope: Social movements in the Internet age. John Wiley & Sons.

Castells, M. (2016). A sociology of power: My intellectual journey. Annual Review of Sociology, 42, 1-19.

Cheng, E. W. (2016). Street politics in a hybrid regime: The diffusion of political activism in post-colonial Hong Kong. The China Quarterly, 226, 383-406.

Della Porta, D. & Diani, M. (2009). Social movements: An introduction. John Wiley & Sons.
Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication, 43*(4), 51–58.

Facebook penetration rate in Taiwan tops the world. (2014, Feb 28). *The Apple Daily*. Retrieved from https://protect-au.mimecast.com/s/5vY4BRfndD1Zik?domain=appledaily.com.tw

Feinstein, A. R., & Cicchetti, D. V. (1990). High agreement but low kappa: I. The problems of two paradoxes. Journal of clinical epidemiology, 43(6), 543-549.

Gamson, W. A. (2004). Bystanders, Public Opinion, and the media. In D. A. Snow, S. A. Soule, & H. Kriesi (Eds.). *The Blackwell companion to social movements* (pp. 242-261). Blackwell Publishing.

Harlow, S. (2012). Social media and social movements: Facebook and an online Guatemalan justice movement that moved offline. *New Media & Society, 14*(2), 225-243.

Ho, M. S. (2015). Occupy congress in Taiwan: Political opportunity, threat, and the Sunflower Movement. *Journal of East Asian Studies, 15*(1), 69-97.

Hong Kong has 4.4 mln Facebook users. (2014, July 25). Retrieved from http://www.ejinsight.com/20140725-hong-kong-facebook-users-top-4-4-million/

Hsiao, Y., & Yang, Y. (2018). Commitment in the cloud? Social media participation in the sunflower movement. *Information, Communication & Society, 21*(7), 996-1013.

Jiang, M., & Esarey, A. (2018). Uncivil Society in Digital China: Incivility, Fragmentation, and Political Stability. *2018). Uncivil Society in Digital China: Incivility, Fragmentation, and Political Stability. International Journal of Communication, 12, 1928-1944.*

Lee, F. L., & Chan, J. M. (2016). Digital media activities and mode of participation in a protest campaign: A study of the Umbrella Movement. *Information, Communication & Society, 19*(1), 4-22.

Lee, F. L., & Chan, J. M. (2018). *Media and protest logics in the digital era: The Umbrella Movement in Hong Kong*. Oxford University Press.

Lee, P. S., So, C. Y., & Leung, L. (2015). Social media and Umbrella Movement: insurgent public sphere in formation. *Chinese Journal of Communication, 8*(4), 356-375.

Lin, I. F. (2014, April 20). How technology and citizen media shaped Taiwan’s Sunflower Movement. *Global Voices*. Retrieved from https://globalvoices.org/2014/04/20/how-technology-and-citizen-media-shaped-taiwans-sunflower-movement/
Ma, N. (2009). Social movements and state-society relationship in Hong Kong. In K. E. Kuah-Pearce & G. Guiheux (Eds.). Social Movements in China and Hong Kong: The Expansion of Protest Space (pp. 45-63). Amsterdam: Amsterdam University Press.

Matthes, J., & Kohring, M. (2008). The content analysis of media frames: Toward improving reliability and validity. Journal of Communication, 58(2), 258-279.

Melucci, A. (1996). Challenging codes: Collective action in the information age. Cambridge University Press.

Meraz, S. (2017). Hashtag wars and networked Framing: The private/public networked protest repertoires of Occupy on Twitter. In A. S. Tellería (Ed.) Between the public and private in mobile communication (pp. 303-323). Routledge.

Meraz, S., & Papacharissi, Z. (2016). Networked Framing and Gatekeeping. In T. Witschge, C.W. Anderson, D. Domingo, & A. Hermida (Eds.). The Sage Handbook of Digital Journalism (pp. 95-112). London: Sage.

Mercea, D., & Funk, A. (2016). The social media overture of the pan-European Stop-ACTA protest: An empirical examination of participatory coordination in connective action. Convergence, 22(3), 287-312.

Myers, D. J. (1994). Communication technology and social movements: Contributions of computer networks to activism. Social Science Computer Review, 12(2), 250-260.

Mottl, T. L. (1980). The analysis of countermovements. Social Problems, 27(5), 620-635.

Nip, J. Y. M, & Fu, K. W. (2016). Networked framing between source posts and their reposts: an analysis of public opinion on China’s microblogs. Information, Communication & Society, 19(8), 1127-1149.

Pan, Z., & Kosicki, G. M. (1993). Framing analysis: An approach to news discourse. Political Communication, 10(1), 55–75.

Ryan, C. (1991) Media battlefronts: Political action and coverage in the press. Social Policy 22, 8–15.

Shirky, C. (2009). Here comes everybody: The power of organizing without organizations. Penguin.

Snow, D. A. (2013). Framing and social movements. In D.A. Snow, D. della Porta, B. Klandermans, & D. McAdam (Eds.). The Wiley-Blackwell encyclopedia of social and political movements. Blackwell Publishing Ltd.
Snow, D. A., & Benford, R. D. (1988). Ideology, frame resonance, and participant mobilization. *International social movement research, 1*, 197-217.

Tarrow, S. (2014). Critical dialogue. [Reviewed of the book *The Logic of Connective Action: Digital Media and the Personalization of Contentious Politics*, by W. Lance Bennett and Alexandra Segerberg]. *Perspectives on Politics*, 12 (2) pp. 468-470.

Walgrave, S., Bennett, W., Van Laer, J., & Breunig, C. (2011). Multiple engagements and network bridging in contentious politics: digital media use of protest participants. *Mobilization: An International Quarterly, 16*(3), 325-349.