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Telegram and the anti-ELAB movement in Hong Kong: reshaping networked social movements through symbolic participation and spontaneous interaction

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ABSTRACT

Networked social movements can create autonomous communication networks supported by digital media and are often viewed as leaderless and decentralized under the logic of connective action. Nevertheless, a certain level of leadership may exist and is informally distributed among movement participants. This essay examines protest activities in networked social movements and discusses how loosely connected protests can be collectively mobilized and organized utilizing social media affordances through two forms of participatory activity: symbolic participation and spontaneous interaction. Specifically, this essay investigates the messages and chats of the Anti-Extradition Law Amendment Bill movement (anti-ELAB) in Hong Kong on the public channels of the social media platform Telegram. An analysis of two million anti-ELAB messages revealed two important protest activities conducted to organize and mobilize social movements. First, Telegram users, although they varied in their usage of the platform's technology, engaged with subscription models to navigate the symbolic and tactical repertoires of diverse user groups and to organize theme-oriented actions by creating informative, supportive/backup, and cooperative networks. Second, they employed hashtags to promote and organize spontaneous interactions to rally and sustain autonomous individuals. Furthermore, geolocation hashtags allowed for engagement with others by scaffolding real-time and spontaneous communications that transcended space and time. This essay provides insights into how participants in networked social movements use digital media to mobilize, organize, publicize, and participate in protests.

KEYWORDS Anti-ELAB; Hong Kong; symbolic; spontaneous; subscription; hashtag; geolocation

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Introduction

With ever-changing media landscapes, social movements and protesters have adapted, adopted, and customized alternative forms of media. With the proliferation and diversification of digital technology, the spread of social media platforms is positively correlated with the protest potential in authoritarian states (Howard, 2019). Detailed by van de Donk et al. (2004), digital media are used in social movements for three specific purposes: (1) to mobilize resources, (2) to provide political opportunities, and (3) to consolidate ideology, identity, and persuasion. Specifically, the increased intensity of interactions, the diversified access to alternative information, the lowered cost and risk of coordination, and the accelerated pace of the spread of multimedia content have altered the ways in which groups communicate with each other (Jost et al., 2018; Ruijgrok, 2017). However, the advantages of social media for protest activities are often considered monolithic despite the variety of social media platforms available and the range of protest movement politics. As a result, previous literature has either considered social media as a complementary or alternative system of mass media in the context of collective action or has concentrated on the unified affordances of information propagation illustrated by Facebook and Twitter as “connective actions” (Anduiza et al., 2014; Bennett & Segerberg, 2013). The assumption that all internet technologies follow the same logic prevents researchers from identifying the multiplicity of social media platforms and their corresponding logics (Pond & Lewis, 2019). For instance, Facebook can be seen more as a recruiting tool, whereas Twitter serves as an internal platform for coordination among protest participants (Gerbaudo, 2012). Furthermore, online discussion forums have had the effect of decentralizing opinion leadership and distributing it unevenly in networked social movements (Liang & Lee, 2021).

Therefore, instead of investigating all social media platforms from a unified perspective, it is worth examining platform-specific affordances in networked social movements. The present essay thus focuses on two forms of participatory activities in the prominent social media platform Telegram, used during the 2019 anti-Extradition Law Amendment Bill (anti-ELAB) movement in Hong Kong. In the anti-ELAB movement, the dominant information communication technologies (ICTs) dramatically shifted to the open-platform social networking app Telegram and the Reddit-like online forum LIHKG (Lidan), with fewer people continuing to use Facebook, Twitter, and WhatsApp (Lee, 2020; Ting, 2020). Given the uniqueness of Telegram, digital media use in social movements like the anti-ELAB movement can be located in two conspicuous forms of participatory activity: 1) symbolic participation to navigate tactical repertoires of user groups through subscriptions to diverse Telegram channels and 2) spontaneous

interactions to engage with and exchange information with other social movement participants who attended or were interested in attending events, primarily by using hashtags on Telegram. Also, it is noteworthy that this study considers subscriptions and attentions to Telegram channels as potential means of mobilizing participation in the social movement rather than as actual participation. In this essay, we first review the literature on social movements and the role of digital media. Then, we use empirical data collected on Telegram to illustrate how the platform-enabled technological features, such as the channel subscription model and the geolocation hashtags, enabled its users, particularly those who were actively involved in creating and maintaining Telegram channels, to participate in the anti-ELAB movement through symbolic participation and spontaneous interactions.

The next section provides background on the anti-ELAB movement and the unique role of Telegram in the movement, after which we discuss the two forms of participatory activity in networked social movements. The empirical results are then presented through a computational network analysis of Telegram channel messages after each form of activity is conceptually elaborated.

The anti-ELAB movement in Hong Kong

The anti-ELAB (Extradition Law Amendment bill) movement in Hong Kong started in February 2019. Multiple waves of anti-ELAB protests were carried out that year to push back on the Hong Kong government's passing of the Fugitive Offenders and Mutual Legal Amendment bill (FOMLA). FOMLA was initially drafted in response to the murder of a Hong Kong resident in Taiwan. This new bill would facilitate mutual legal assistance and provide flexibility in transferring fugitives between Hong Kong and other nearby jurisdictions, such as Taiwan, Macau, and mainland China. For those involved in protecting Hong Kong's democracy, FOMLA presented a threat to the maintenance of Hong Kong's independent legal system as well as to the protection of basic rights to expression, speech, and privacy in Hong Kong (Purbrick, 2019; Lee, 2020). At one stage of the anti-ELAB movement, more than two million people attended a public demonstration, which was the highest protestor turnout since the 1997 handover (Purbrick, 2019).

The incredibly large participation in the anti-ELAB protests can be attributed to the information technologies used to support social movement mobilization. Specifically, the anti-ELAB movement incorporated a handful of social media platforms for different purposes. Facebook, Twitter, and Instagram were used largely to legitimize the movement by broadcasting information to an international audience. These three traditional social

media platforms were also used for crowdfunding campaigns, as they have built-in functionalities that allow for speedy and fairly safe transactions (Wong, 2020). Newer technologies available on mobile devices with live-streaming features were also used. Facebook Live and Instagram TV (IGTV) allowed for real-time coverage of the protests. Apple Airdrop was used to avoid the restrictions of existing technologies' information-sharing capabilities (Holbig, 2020).

The use of telegram in the anti-ELAB movement

Political participation and social protests through the internet and social media have become a well-established research topic in the last two decades. Collective actions are increasingly taking place on social media in the twenty-first century, and this has coincided with waves of political protest around the world and the accompanying challenges to mobilizing resources and participation (Boulianne et al., 2020; Lopes, 2014). The use of social media has played a key role in mobilizing people, especially in terms of disseminating information, promoting discussions, planning events, and connecting with others who are interested in participating (Boulianne et al., 2020). Technology capabilities built into social media platforms facilitate protest coordination (Jost et al., 2018), decrease protest costs and risks (Ruijgrok, 2017), expand participation networks (Su et al., 2017), and enable the construction of collective identities (Khazraee & Novak, 2018). Furthermore, social media can stimulate the core antecedents of protest participation by developing psychological in-group attachment, triggering emotions, and stimulating political efficacy among protesters (Chan, 2017; van Zomeren et al., 2008).

Among the digital technologies utilized in the anti-ELAB movement, Telegram, a rapidly growing social media application founded in 2013 (Urman et al., 2021), was intensively adopted by the protesters and online participants to disseminate information and mobilize people, in contrast to the Umbrella Movement of 2014, which was dominated by Facebook and WhatsApp (see Lee & Ting, 2015; Lee & Chan, 2018). Telegram is a social media platform that allows users to create and publish content publicly as well as to connect with other users and create online communities (Urman et al., 2021), combining the reach of an email newsletter with the immediacy of a Twitter feed (Walker, 2020). Given Telegram's encryption algorithms and options for privacy protection, this application is a popular choice for protests and social movements.

In 2013, Telegram was created by two Russian entrepreneurs in response to Russia's tight control over speech and expression (Akbari & Gabdulhakov, 2019). The founders created Telegram as a tool to skirt

political oppression and provide a more privatized, open speech environment. This origin story of Telegram is what makes the platform unique and, importantly, it explains the aptness of Telegram as a social media platform for social movements.

Notably, Telegram has certain affordances that make it well suited for networked social movements like anti-ELAB. First, it allows users to gain publicity while maintaining anonymity through several app-level features, such as public and private channels/groups and encryption algorithms. It also supports secret chats, enables unsending, and requires anonymous forwarding. These features can enhance privacy and anonymity, provide opportunities to gain publicity, and reduce the cost of coordination and mobilization (Urman & Katz, 2020). Second, Telegram users benefit from greater control over the content they see due to the absence of algorithmic filtering and advertising (Urman et al., 2021). It is more difficult for authoritative states to spam and hijack conversations because channels and groups tend to be referenced by other resources, leading to their popularity and growth. Third, the strength of the algorithmic feature is in providing credibility and mitigating mistrust in activist culture by requiring encrypted chats to protect messages from being spied on by authorities and government. These encrypted chats were also often used during the anti-ELAB protests to arrange safe transportation for protesters leaving demonstration sites (Wong, 2020). Fourth, Telegram's channels and user groups function as the basic units for aggregating conversations, enabling the dissemination of planned future actions or actual on-site, protest-related information, such as police presence. The diversity and flexibility of Telegram channels and groups ensured that protest administrators and (co-)organizers consisted of different actors for individual protest, rather than a few "traditional protest leaders" (Partz, 2020). As a result, there were more local communities and fewer media and civic organizations in the anti-ELAB movement than in the 2014 Umbrella movement (Urman et al., 2021). Finally, the lack of publicity in Telegram largely contributed to the leaderless and decentralized characteristics of the anti-ELAB movement (Lee et al., 2021; Ting, 2020). Telegram users do not see what their friends have publicly posted, as happens on Facebook and Twitter. They can only see personal messages from their friends or posts from public channels to which they are subscribed.

These five unique characteristics of Telegram's use in the anti-ELAB movement demonstrate how social media platform affordances can reinforce protest activities. Davis and Chouinard (2016) define affordance as the way materials and design elements influence whether certain actions are encouraged, discouraged, or refused by a technology. That is, affordance is the potential embedded in the materiality of a technology that may

or may not be utilized (Earl & Kimport, 2011). At various stages of a protest movement, different types and degrees of impact can be achieved through the use of a digital platform (Hensby, 2017). Hence, the conditions and dynamics of the ongoing movement will play a significant role in shaping the impact of digital media (Lee et al., 2021). As Tilly (2005, 2008) explains, technology is by no means designed to be “repertoires of contention” (i.e. a part of political activism); rather, people make strategic choices that transform affordances so that they are understood as action possibilities (see Gibson, 1966). The adoption of Telegram by anti-ELAB protesters over other mainstream social media has less to do with the technology and more to do with activists’ perceptions and actions, as well as the context in which they found themselves.

However, the fact remains that Telegram channel owners and moderators differ from ordinary users in that they are more involved in the operation of the channels on a daily basis. The subscription model, arguably Telegram’s most valuable feature, may provide more resources and power to channel owners, even though all Telegram users possess the right to create a channel that is secured by encryption algorithms and anonymity options. We contend, however, that to varying degrees, the five characteristics that differentiate Telegram from other social media platforms in the context of social movements and protests are applicable to both channel owners and ordinary users.

Next, we present empirical data on Telegram usage collected during the anti-ELAB movement and then propose two categories of participatory activities based on inductive observations to explore the mechanisms and patterns of bottom-up activism and ecology.

Data collection and message network

This essay used snowball sampling to collect data from Telegram public channels relating to the activities of the anti-ELAB movement during the period June 1, 2019 to June 30, 2020. Our data collection methodology complied with Telegram’s terms and conditions. Due to the lack of curated lists of channels and groups related to the Hong Kong protests, we manually archived relevant channels based on a snowball-based approach, following previous studies (Urman & Katz, 2020; Urman et al., 2021). To begin, we archived all public conversations from a few very popular Telegram channels in the anti-ELAB movement. Based on the information shared and forwarded in these messages, we then extended our data collection to channels mentioned in these conversations. Two Hong Kong-based research assistants evaluated whether these further identified channels were related to the anti-ELAB movement and, if they were, reviewed the

shared and forwarded messages to extend the search to further channels. After five rounds of data collection, we had identified 556 Telegram channels. During the final search, 12 additional channels were found; among these, 10 were overseas channels and two were Hong Kong local channels. As the number of extra channels found greatly decreased in the last two rounds, we decided to stop there.

In the 556 Telegram channels related to the anti-ELAB movement, we collected 2,150,364 entries, each entry representing one Telegram message, which may comprise a self-post or a retweet. Of these entries, 54.12% were self-posts ($N = 1,163,687$), and 45.88% were retweets ($N = 986,677$). All publicly available information was collected for each entry, including the timestamp of the posting date, the forwarded channel name (the source channel), the shared channel name (the primary channel), the hashtags recorded in the message, the timestamp of the original message, and the metainformation of each channel, such as the established time, the number of members, and channel descriptions, etc. As a security precaution, we removed all information that could be used to identify individual Telegram users and protesters. In this essay, we do not reveal any information about the specific content in these archived messages or conversations; rather, we report only numerical information related to self-posting, mentioning, sharing, and/or forwarding Telegram posts and conversations.

A directed message network was constructed from the archived Telegram messages and conversations. In this network, each node represents a Telegram channel. An edge, or a recorded data entry, corresponds to a mention/ repost in two Telegram channels. For self-posted messages, the edges were created in the same source node and the target node. Based on the constructed message network, we conducted empirical analyses to examine the two proposed participatory activities.

Symbolic participation: Navigating and subscribing to thematic channels

Social movements are often at the forefront of championing causes and drawing attention to politically contentious issues in contemporary society. The nature of protest activities and actions is that they consist of an interplay between visibility and publicity, with the goal of bringing a matter to the forefront (Lipsky, 1968). By considering social movements as “collective manifestations” (Eisinger, 1973), media representations and protest tactics together create a “spectacle,” attracting public attention through news coverage and appealing to others who might be interested in joining the movement. Media representations of social movements as symbolic gestures for both activists and the public have tended to fall into either

episodic or thematic types of news coverage in traditional mass media (Iyengar, 1991). Thematic representations, which explain the general and abstract context of a movement, appear less frequently due to the lack of entertainment, disruption, and violence that the media craves (Smith et al., 2001; Cable, 2016). Therefore, the mainstream media has been criticized for focusing exclusively on news values, such as “McProtest” (Klein, 2002), and ignoring the thematic events of a movement. This distortion in media representation is one of the factors that shifts protesters’ attention to social media platforms, enabling increasingly personalized and customized communication with other interested individuals within activist cultures (Bennett & Segerberg, 2011; Cable, 2017).

For the anti-ELAB movement, Telegram was particularly useful in terms of protecting personal identity, preserving democratic rights, and exercising democratic freedoms (Wong, 2020). A critical issue is that as a leaderless and decentralized movement (Lee et al., 2021), how did interest groups and individuals in the anti-ELAB movement define and understand the subnetworks of protest activities, if any, from their representations in social media? In this essay, we argue that Telegram users applied subscription models to navigate, browse, and define personalized and customized subnetworks of protest activities. By *symbolic participation*, we refer to the tactical repertoires of local groups and their members in taking thematic-oriented actions through subscribing to and gravitating toward one or more Telegram channels. In particular, self-posts in Telegram created hubs where symbolic participation and corresponding actions could potentially aggregate, whereas retweets in Telegram allowed for subscription, dissemination, and attention generation.

Previous literature defines protest participation as involvement in different political activities (Klandermans & Oegema, 1987), which ignores the idea of symbolic participation. The concept of protest participation remains ambiguous and lacks articulation in both its conceptual scope and empirical application (Theocharis & Van Deth, 2017). Protest participation can be analyzed on two conceptual levels: as an aggregate-level collective phenomenon or as an individual manifestation of one’s political beliefs (Grasso & Giugni, 2016). Typically, studies focus on the latter, focusing more on the investigation of individual protest participation while neglecting aggregated activities, whether large or moderate in scale. Protest participation can include a wide range of actions, from peaceful demonstrations and strike attendance to more radical actions, such as blockades, occupations, and even violence (Giugni & Grasso, 2019). In the absence of an explicit definition of protest-related actions on media platforms, the association between participation in protests, local organizations, and the use of different kinds of social media platforms remains unclear in terms of protest participation.

Redirecting attention from media coverage to the activities of users or potential protesters, Telegram channels facilitate customized participation and allow users to choose between the preservation of their privacy or public visibility based on their individual needs. Therefore, symbolic participation in a networked social movement can be characterized as a set of user behaviors, including choosing, selecting, browsing, searching, and joining groups of interest. These behaviors are characterized by thematic intentions that are enabled by the navigation of subscriptions to local subcommunities delivered via social network platforms, such as Telegram. In practice, Telegram's subscription model, as well as the local subnetworks formed through it, provides a "menu" of participation opportunities and possibilities. As such, symbolic participation empowered many forms of participation in the anti-ELAB movement and re-centralized participation alternatives with respect to which events, protests, or themes protesters preferred to join.

To understand how Telegram users participated in the anti-ELAB movement through a variety of thematically focused Telegram channels based on the subscription model, we assigned each channel a category based on its associated metainformation, resulting in 31 categories in total; these included regional information, TV/newspapers, traffic, civic organization, etc. In [Table 1](#), all categories are presented along with the frequency and percentage of posts by category over the period of data collection.

After reviewing these categories, we qualitatively analyzed the differences and similarities among them. We concluded that by leveraging the platform-enabled subscription model through symbolic participation, users' activities based on the Telegram channels they subscribed to could be classified into three subnetworks: informative ($N=14$), supportive/backup ($N=9$), and cooperative ($N=8$). We conceive of subnetworks as categories, types, and classes of channels that attracted the attention of groups of users who shared similar interests and information needs to allow them to participate online and/or offline in the anti-ELAB movement. Specifically, the informative network refers to Telegram channels and categories that were used to provide event, protest, and movement-related information to social groups and the general public. The supportive/backup network consists of a number of Telegram channels with highly motivated, correlated users and subnetworks, created to provide all kinds of support to protesters, including but not limited to financial, traffic, mental, and medication support. In the channels that were part of the cooperative network, Telegram users were gathered and motivated to cooperate toward achieving a common goal, as is usually observed in collective actions. [Table 2](#) summarizes the three subnetworks and the assigned categories.

In the last column of [Table 1](#), we present the standardized frequency of archived posts and messages per channel for each category. Referring to

Table 1. The categories of telegram channels.

Category	Number of channels	Frequency	Percentage	Standardized frequency
Information platform	169	1,063,689	49.5%	6,294
Event information	50	26,804	1.2%	536
District councillor information	46	14,938	0.7%	325
Industry union	44	10,255	0.5%	233
Onsite information	39	375,593	17.5%	9,631
Regional information	37	174,373	8.1%	4,713
Yellow economic circle	32	7,551	0.4%	236
Backup finance	30	11,652	0.5%	388
Online media	28	72,852	3.4%	2,602
Backup material	24	14,524	0.7%	605
Promotion local	23	53,291	2.5%	2,317
University information	23	32,306	1.5%	1,405
Promotion International	18	11,384	0.5%	632
TV/newspaper	14	118,933	5.5%	8,495
Civic organization	14	13,743	0.6%	982
Backup study	12	8,600	0.4%	717
High school student information	10	5,220	0.2%	522
Promotion keyboard	9	15,733	0.7%	1,748
Political organization	9	15,691	0.7%	1,743
Anti-movement	9	4,171	0.2%	463
Backup emotion	9	2,280	0.1%	253
Backup medication	8	1,510	0.1%	189
Traffic information	7	38,499	1.8%	5,500
Backup arrest	7	9,891	0.5%	1,413
COVID information	7	4,345	0.2%	621
Foreign language info	6	28,378	1.3%	4,730
Backup work	6	1,833	0.1%	306
LegCo information	5	2,467	0.1%	493
Backup traffic	4	6,570	0.3%	1,643
Backup tech	3	1,342	0.1%	447
Student media	2	1,946	0.1%	973

Note: Standardized frequency is the total number of posts and messages divided by the number of channels within a category.

Table 2, the top 10 categories based on the standardized post frequency in **Table 1** are all from the informative subnetwork, which generated the most posts and messages on Telegram during the anti-ELAB movement. As shown by our data, the Telegram subscription model enabled users to participate in the anti-ELAB movement mainly through the informative subnetwork.

Spontaneous interaction: Hashtag-ing geolocations during the protests

The other form of participatory activity identified in this essay is *spontaneous interaction* through the use of hashtags. Decentralized protests and collective actions are often characterized by spontaneity, which refers to contingent and unplanned events (Snow & Moss, 2014). Many massive and rapidly changing social movements, such as the Beijing Spring student

Table 2. The categories and subnetworks of telegram channels.

Subnetwork	No. of categories	Categories	General function
Informative	14	Information platform, High school student information, COVID information, Anti-movement	Information portals for general movement- related information
		TV/newspaper, Online media, Student media	Coverage of protest by mainstream and online media
		Onsite information, Regional information, Traffic information, University information, Event information	Real-time information for live coordination and mobilization on the ground
		DC information, LegCo information	Information about governments, politics, and official announcements
Supportive/Backup	9	Backup material, Backup finance, Backup traffic, Backup tech	Logistical support for transportation, finance, etc.
		Backup arrest, Backup study, Backup emotion, Backup work, Backup medication	Support for individuals, participants, and protesters
Cooperative	8	Foreign language information, Promotion keyboard, Promotion international, Promotion local	Outreach activities for promotion, advocacy, and social attention
		Political organization, Civic organization, Industry union, Yellow economic circle	Collaboration, cooperation, and mutual support between protesters and other social groups

Note: These categories and their respective general functions were qualitatively analyzed and can only serve as a general description.

protests of 1989 and the Hong Kong Umbrella Movement of 2014, exhibited spontaneity as a key mechanism for mobilizing and conditioning unpredicted on-site events through contextual activation (Cheng & Chan, 2017; Zhao, 1998). According to Snow and Moss (2014), spontaneity is triggered by nonhierarchical organization, unknowable/ambiguous moments, behavioral/emotional priming, and specific ecological/spatial contexts. Cheng and Chan (2017) study sheds valuable light on the spontaneity and the four triggers that contributed to the emergence of Hong Kong's Umbrella Movement in 2014. They argued that a networked structure within a non-hierarchical organization, decentralized but resilient engagement, and the ecology of uncompromising attitudes are the antecedents and prerequisites for spontaneous actions that are supported through

Table 3. Top 20 hashtags related to the Anti-ELAB movement on telegram.

#Hashtags	English	Freq	Genre
旺角	Mong Kok	77,664	Area
天水圍	Tin Shui Wai	51,669	Area
本地	Local	44,046	News Feed
銅鑼灣	Causeway Bay	28,563	Area
尖沙咀	Tsim Sha Tsui	27,949	Area
中環	Central	22,819	Area
港聞	UBM Hong Kong	21,405	News Feed
將軍澳	Tseung Kwan O	21,262	Area
灣仔	Wanchai	19,025	Area
太子	Prince Edward	18,185	Area
深水埗	Sham Shui Po	16,054	Area
公眾安全情報	Public Safety Information	15,197	News Feed
觀塘	Kwun Tong	15,044	Area
黨鐵	Party Rail	14,969	Area
油麻地	Yau Ma Tei	14,,470	Area
現場情況	Situation	14275	News Feed
元朗	Yuen Long	13,888	Area
沙田	Shatin	13,605	Area
國際	International	12,667	News Feed
武漢肺炎	Wuhan Pneumonia	12,615	News Feed

extensive social media use. Through survey data and participant observations, they demonstrated that social media could form autonomous networks among rallied individuals from various backgrounds to sustain a self-mobilized and horizontally engaged movement.

Similarly, the anti-ELAB movement inherited spontaneity from the previous social movement in Hong Kong but further streamlined it through Telegram's hashtag feature and its use of geotags. This essay argues that protesters in the anti-ELAB movement combined spontaneity with premeditated, asynchronous mobilization and on-site synchronous information-sharing through Telegram. Furthermore, they employed hashtags to promote and organize spontaneous interactions to rally and sustain autonomous individuals despite their differing usage of the platform's technology. Thus, hashtags were used for both asynchronous and synchronous participation, scaffolding real-time and spontaneous communication that transcended space and time.

To observe the spontaneous interaction between Telegram users through hashtags, we first estimated the proportion of hashtags that appeared as a single hashtag or multiple hashtags in each data entry using our dataset. We found that 91.28% of all archived Telegram posts and messages had three or fewer hashtags, 99.14% had ten or fewer hashtags, and 99.68% had 20 or fewer hashtags. The largest number of multiple hashtags used in one message was 333, and less than .01% of data entries contained more than 80 hashtags in a single message. To further explore how they appeared in the anti-ELAB movement, we extracted the top 10 hashtags from each message and performed descriptive analysis, resulting in 103,046 unique hashtags. Following an initial review of all hashtags that appeared



Figure 1. Map of the geolocation hashtags. Source: <https://dnnsociety.org/2018/02/02/create-simple-filled-map-hk-in-tableau/>.

at least 50 times ($N=2,739$), we identified five categories among these hashtags: (1) geolocations (particularly local regions and districts in Hong Kong), (2) movement slogans (e.g. #兄弟爬山—“brothers climbing a mountain”), (3) priming keywords in anti-ELAB (e.g. #黃色經濟圈—“yellow economic circle”—and #手足投稿—“contributions from brothers in arms”), (4) events (e.g. #毋忘721—“don’t forget 7/21”), and (5) mobilization (e.g. #文宣—“promotion”). According to Table 3, 15 of the 20 most frequently occurring hashtags were geolocations, a category that was prevalent across all extracted hashtags.

For a deeper understanding of the spontaneous interactions on Telegram, we mapped out all geolocation hashtags across the regions and districts of Hong Kong and standardized their sizes based on how often these hashtags were used (see Figure 1). Figure 1 shows that the most frequently occurring geolocations were the ones where most protests, clashes with police, and demonstrations were held during the anti-ELAB movement, including Mong Kok, Tin Shui Wai, Causeway Bay, Tsim Sha Tsui, and Central. Accordingly, hashtags dominated these locations in accordance with the spontaneous events of the movement. For example, protesters clashed with the police in Mong Kok on July 7, 2019, and then marched from Tsim Sha Tsui to West Kowloon Station to stage a demonstration to mainlanders and tourists on the same day. Furthermore, the contingent route from Causeway Bay toward Central corresponds to a number of actions protesting an executive order for demonstration permit withdrawal at the Legislative Council (LegCo) on July 1 and the arrest of protesters by undercover officers with arms on August 11. The clashes between protesters and police that took place in Mong Kok and other areas illustrate the predominant use of geolocation hashtags for the live coordination of

protest activities. Thus, our analysis shows that Telegram users in the anti-ELAB movement engaged in spontaneous interactions with others most frequently using hashtags with geolocations.

Conclusion

In the context of the leaderless and decentralized characteristics of networked social movements, protesters perceive digital media technologies as a positive tool to mobilize and publicize collective actions (Cable, 2017). This essay examines a unique alternative social media platform, Telegram, which was popularized and widely adopted by the anti-ELAB movement in Hong Kong. We discussed how loosely connected protests may be navigated, as exemplified by Telegram's channel subscription model, and how they may also be mobilized and coordinated through spontaneous interactions utilizing geolocation hashtags. Two forms of participatory activities are proposed, conceptualized, and discussed.

Specifically, symbolic participation allowed Telegram users to explore the tactical repertoires of local groups through channel subscription models and to create informative, supportive, and cooperative subnetworks to organize theme-oriented actions. Despite the fact that the present data analysis was not able to directly link symbolic participation on Telegram to actual physical, on-site participation, the three different subnetworks offered by Telegram's subscription model provided users with a comprehensive online environment that could potentially move networked mobilization into actual participation. The informative subnetwork, for example, did not just provide information about on-site protests in real time but also collected and disseminated news coverage of protests in the mainstream media and on the web, as well as information about governments and politics and official announcements. Posts shared in the informative subnetwork were able to mobilize users who gathered in the supportive/backup subnetwork to provide logistical support with more effective tactics and responsive strategies, such as transportation or finance. Therefore, the networked mobilization that was formed through symbolic participation may have lead to actual participation.

Hashtags found in Telegram messages and conversations were also used to mobilize and organize spontaneous interactions to rally autonomous individuals regardless of how they used the information technology, significantly through the use of geolocation hashtags. Telegram users who were interested in participating in the protests of the anti-ELAB movement were able to engage in both asynchronous and on-site synchronous information sharing through channels on Telegram, which further rallied and sustained autonomous individuals who used the technology in various ways. Future studies could explore the relationship between hashtags on Telegram and

conversation networks to examine the actual mobilization effects through spontaneous interactions.

However, the two forms of participatory activities are conceptualized and described in the context of the assumption that all members of Telegram have equal access to channel creation and message forwarding, but with the limitation of examining the actual usage effects on different types of Telegram users. Future studies could investigate the distinct effects of Telegram on different types of users in social movements, based on audience consumption and behavioral data. Nevertheless, this study argues that the two forms of participatory activities enabled users to engage in real-time, spontaneous communication capable of transcending space and time to engage with and exchange information with others asynchronously and synchronously within the anti-ELAB movement. With large-scale data collection during the movement period and by employing the directed message network approach, our essay examines how Telegram users were able to use these two forms of participatory activities to transcend the limits of space, time, and protest mechanisms.

Disclosure statement

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