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Deliberation in Mobile Messaging Application: A Case in Hong Kong

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Abstract:

Considering the increasing penetration of Internet and mobile technologies, we can foresee that more online debates and political discussions, such as online deliberations, will occur in the future. However, prior research does not illustrate or provide empirical evidence to support steps that that online deliberation should take. To address this gap, we conduct a case study on Project ThunderGo, an online deliberation campaign related to the 2016 Hong Kong Legislative Election. Via analyzing data obtained from their deliberation groups, the relevant news articles, and the election results, we establish a four-stage building, engineering, arriving, and reaching (BEAR) model of online deliberation and provide some practical implications for future deliberation host. The model and implications articulate ICT's role in addressing complicated and multi-facet social problems.

Keywords: E-democracy, Online Deliberation, Political Discussions, Information Behavior, Netnography, Project ThunderGo, Digital Activism.

1   Introduction

A deliberation refers to a process in which a group of individuals exchange rational arguments about a common or public problem in order to find a solution acceptable for all stakeholders (Habermas, 1989). In recent years, Web technologies have increasingly enabled such deliberations given that the Internet has created the ideal conditions for deliberative democracy (Dahlberg, 2007). For example, the increasing popularity of smartphones has encouraged individuals to adopt mobile instant messaging (MIM) applications, and these applications have lowered the participation barriers for individuals to participate in politics (Dahlberg, 2001; Wright, 2010). As a result, we have seen an increasing number of debates about the best way to conduct and promote online deliberation, such as using MIM for online deliberation (Gonzalez-Bailon, Kaltenbrunner, & Banchs, 2010).

While online deliberation can result in quicker decision times, greater legitimacy, and better-quality policymaking (Xiao & Askin, 2014), the literature on online deliberations contains some gaps, such as design considerations for online deliberation systems (Towne & Herbsleb, 2012) and the deliberative conditions and processes that an online deliberation requires to succeed (Gonzalez-Bailon et al., 2010). While some prior research about online deliberations (Black et al., 2011; Dahlberg, 2001) has discussed these aspects, it has not adequately contributed any process theories or guidelines for practitioners and researchers to follow and not provided adequate empirical evidence to elaborate or support its arguments (Friess & Eilders, 2015). Besides, most research discusses only the process of deliberations, but we also need to discuss the process of how to engage more participants to join the deliberation and how to implement the decision effectively after the deliberation (Wahid, 2013) given that research has considered attracting participants and creating productive outcomes a vital part of successful deliberations (Towne & Herbsleb, 2012; Friess & Eilders, 2015). Without empirical step-by-step guidelines, deliberation hosts may not be able to conduct successful deliberations that engage participants or produce a recognized outcome regardless of the online system they adopt or the number of participants with the common ground.

On the contrary, a step-by-step guide that demonstrates how to conduct a successful online deliberation would address researchers' interest in processes and theories of online deliberation and practitioners' need for guidance about how to conduct a successful online deliberation. Thus, such a guide would maximize and sustain online deliberations' benefits (Friess & Eilders, 2015; Xiao & Askin, 2014). To address these gaps, we establish a relevant step-by-step guideline using a case study approach and netnography to show how one can adopt mobile messaging applications to conduct online deliberations. We base our case study on "Project ThunderGo", an online deliberation related to the 2016 Hong Kong Legislative Election, which had approximately 42,000 voluntary participants and significantly influenced the election results. Accordingly, we address the following research question:

> **RQ**:   How can one conduct an online deliberation in mobile messaging applications?

2   Literature Review

2.1   Online Deliberation

Prior studies include some common ideas in how they define "deliberation". First, deliberation involves the concept of a genre or form of communication that features "the performance of a set of communicative behaviours that promote thorough group discussion" (Burkhalter, Gastil, & Kelshaw, 2002). Next, in the communication process, individuals carefully weigh the reasons for and against others' propositions (Gastil, 2000) on top of presenting their own arguments (Noveck, 2004). Besides, a deliberation requires maximum representation and argumentation (Ackerman & Fishkin, 2002). Thus, the deliberation process involves both information seeking (through communicative behaviors in the discussion) and problem solving (through weighing the reasons for and against others' proposition carefully) in typical information behavior models (Case & Given, 2016; Mishra, Allen, & Pearman, 2015). On the other hand, deliberation groups may make it possible for citizens to engage more in policymaking in democratic societies (Navarra & Cornford, 2011).

The Internet democratizes communications, enhances civic participation, provides mobilizing capacities to citizens who lack organizational membership as a traditional agent of political actions (Chan, 2013; Lee, 2016; Nemer & Tsikerdekis, 2017), and, thus, fosters online deliberation (Halpern & Gibbs, 2013). With the help of social media, citizens and politicians can reciprocally engage with each other (Goh, Xin, Jin, 2018). Further, with the appropriate social media tools, one can develop various forms of political e-participation (Wahid & SæbØ, 2015; Dini, Wahid, & SæbØ, 2016). Nowadays, online deliberation has

become a research topic in political science (Towne & Herbsleb, 2012), information systems (Black et al., 2011; Xiao & Askin, 2014), and academic governance (Escher et al., 2016). Researchers have studied various aspects of online deliberations, such as why people participate, how one should design tools (see Table 1), and processes and outcomes (see Table 2).

In short, people usually participate in the online deliberation because they want to speak up in the democracies and to have a role in the issues which they care about or that affect them (Baek et al., 2012; Chung & Han, 2013). When choosing online deliberation systems, the host should consider their accessibility, transparency, navigability, usability, adaptability, dynamic features, enjoyment, the extent to which they allow one to disseminate information, security level, and system speed (De Munck et al., 2012; Semaan et al., 2015). An ideal deliberation process should equally treat all participants and emphasize common ground with a rational and constructive atmosphere (Trenel, 2004). In return, an ideal deliberation can increase participants' awareness and knowledge of the subject issues, facilitate decision making, and enhance the legitimacy of the final decision (Friess & Eilders, 2015).

However, many arguments in Table 1 and Table 2 are either conceptual or do not demonstrate a complete deliberation process. To provide practitioners with complete and empirically proven guidance to hold a successful online deliberation, researchers need to build a process theory of online deliberation that adequate empirical evidence from a successful case supports. On the other hand, the rise of smartphones (Zhang, Xu, Pathak, & Mohapatra, 2015) and growth of MIM applications (Church & de Olveira, 2013) have played a significant role in different social and political movements (Gordon, 2016; Kow, Kou, Semaan, & Cheng, 2016). Considering the nature of online deliberations as a type of computer-mediated communication (CMC), we examine the characteristics of CMC and MIM applications in Section 2.2.

Table 1. A Selected List of Arguments about the Motivations and Tools Design Consideration

References	Arguments
Motivations	
Elster (1998)	Some online deliberation participants want to overcome the impact of bounded rationality, to shape consensus, and to improve participants' intellectual qualities.
Albrecht (2006)	Considering the crisis of representation in modern democracies and the proliferation of Internet technologies, ordinary citizens are more likely to consider different online means to express their point of view.
van der Merwe & Meehan (2012)	When the citizens are being affected seriously or even feel being threatened by the subject issues, they will be more motivated to communicate with each other in order to find a solution. In this case, online deliberation may become an option.
Baek, Wojcieszak, & Delli Carpini (2012)	People are more likely to participate in deliberations if they are interested, feel they are being affected, or have a feeling of civic duties.
Chung & Han (2013)	Based on their motivations, one may classify deliberation participants into promotion focused and prevention focused. Promotion-focused participants emphasize aspirations and achievements and focus on the likelihood of positive outcomes. Prevention-focused participants emphasize responsibilities and safety and focus on the likelihood of negative outcomes.
Tools design consideration	
Samuel (2004)	Whether the Internet can serve as a home to democratic discourse would depend on the high level of technical security, low technological barriers for participation, and adequate system speed.
Rose & Sæbø (2010)	The design of political deliberation systems should consider stakeholder engagement, platform design, service management, political process reshaping, and evaluation and improvement.
Towne & Herbsleb (2012)	Designers should consider accessibility, transparency, navigability, usability, and adaptability when designing online deliberation systems.
De Munck & Ferreras (2012)	Deliberation medium should be the cognitive equipment of providing information and supporting participants to make an informed choice, which reflects the importance of the design issue.
Semaan, Faucett, Robertson, Maruyama, & Douglas (2015)	In response to the rise and challenges of online political discussion, the online deliberation system should provide good accessibility, navigability, and dynamic features and allow information dissemination.

Table 2. A Selected List of Arguments about the Processes and Outcomes of Online Deliberation

References	Arguments
Processes	
Fishkin, Luskin, & Jowell (2000)	Some deliberations may include not only the exchange of opinions but also "deliberative polling", which allow participants to vote after discussion for making the final decisions.
Trenel (2004)	Rationale debates, which include debates in online deliberations, require participants to stay on the topic, to respect other participants, and to refer to the common ground with a constructive attitude.
Davies & Chandler (2011)	The deliberation host needs to consider four dimensions in the deliberation process: facilitation (e.g., to encourage participants to speak or to provide information), structure (e.g., rules and agenda), identifiability (e.g., the anonymity of participants, if required), and incentivization (e.g., reward for active participation).
Bächtiger & Wyss (2013)	In an ideal deliberation process, participants should justify their positions with references to the common good, respect other participants, justify arguments with solid reasoning, and try to mediate different point of views.
Friess & Eilders (2015)	The deliberation host needs to treat every claim equally and to give everyone the same chance to speak. Besides, the orientation toward common ground and agreement is a fundamental part of the deliberation.
Suh, Lee, Suh, Lee, & Lee (2018)	In many deliberative discussion platforms, malicious comments have become an increasingly serious problem. To alleviate this problem and increase the contributions of the entire deliberative discussion, the discussion host needs to establish moderation policies to encourage high-quality seed comments and to increase identifiability via social networking services.
Outcome	
Cappella, Price, & Nir (2002)	Participation in online discussion will likely produce a greater range of arguments, which includes greater awareness of the reasons behind opposing views. In online discussions, undecided citizens are more likely to shift towards the dominant group's arguments.
Iyengar, Luskin, & Fishkin (2005)	Evidence from an online deliberative poll on U.S. presidential primaries indicates that online deliberation can make participants significantly more informed and knowledgeable about the issues.
Min (2007)	Both online and face-to-face deliberation can increase participants' knowledge on the subject issue, political efficacy, and willingness to participate in politics. Participants can make more informed choices after listening to the arguments of others in the deliberation.
Xiao & Askin (2014)	Online deliberation may serve as a civic common for public discourse, collective reasoning, and information sharing. Thus, the overall decision time is shorter, and the decision quality is likely to increase.
Friess & Eilders (2015)	Policymakers can vest policies or decisions that participants in deliberations make with greater legitimacy, acceptance, and higher quality than in the previous, strictly representative policymaking mode.

2.2 Computer-mediated Communications (CMC) and Mobile Instant Messaging (MIM) Applications

Computer-mediated communication (CMC) refers to any communication that humans conduct or facilitate through digitally based technologies and that involves two or more digital devices (Spitzberg, 2006; McQuail, 2010). This definition includes (among other things) the Internet, cellular phone texts, and instant messaging (IM). Researchers have highlighted the importance of CMC in different contexts for decades, such as e-commerce (Ou, Pavlou, & Davison, 2014), the workplace (Ho & Ho, 2006), education (Tolmie & Boyle, 2000; Bouhnik & Deshen, 2014), and social movements (Chan, 2013; Gordon, 2016). Table 3 shows a list of arguments about the characteristics and mechanisms, while Table 4 shows some earlier arguments about the outcome of CMC applications.

Table 3. A Selected List of Arguments about the Characteristics and Mechanisms of Computer-mediated Communications

References	Arguments
Characteristics	
Smyth (1998)	Online written communication allows writers to confront traumas and difficulties that they usually have refrained from expressing to others and perhaps to themselves.
Joinson (2001)	In CMC contexts, when participants have visual anonymity, they are more willing to share more information about themselves and to express their opinion.
McQuail (2010)	The characteristics and dimensions that one should consider in CMC include synchronicity, recordability, anonymity, and so on.
Wilson & Djamasbi (2013)	CMC support both interpersonal and broadcast communication. In response to the categorization based on impersonal–personal characteristics, CMC occupies the approximate midpoint between broadcast communication media and interpersonal communication media.
Haines, Hough, Cao, & Haines (2014)	CMC requires anonymity to ensure individuals can freely exchange ideas since it can encourage them to express minority viewpoints.
Processes / mechanisms	
Siegel, Dubrovsky, Kiesler, & McGuire, (1986)	In CMC processes, the authors found that social equalization was higher than in other communication mode, which, in turn, fostered group members' participation. On the other hand, the authors found more uninhibited behaviors, such as strong and inflammatory expression in the groups in the CMC context.
Trevino & Webster (1992)	Technology, ease of use, and computer skills may influence the flow of CMC. Further, ease of use, and organizational factors positively influence how users evaluate the impacts of CMC.
Walther (1996)	The hyperpersonal model, which comprises key components such as receivers, senders, asynchronous channels, feedback, and processes, can explain CMC. Comparing with face-to-face communications, CMC lacks physical features and thus emotional elements.
Tolmie & Boyle (2000)	In educational contexts, factors associated with successful CMC include group size, knowledge of other participants, participants' experience, clarity about tasks, ownership of tasks, whether participants need the system, and system type.
Lin (2003)	Mediated communication technology adoption includes the interactions between adoption, systems, technology, audience, social, and user factors.
Brown, Fuller, & Vician (2004)	Several factors such as anxiety about computers, oral communication apprehension, and CMC familiarity contribute to users' anxiety about CMC. In turn, users' anxiety about CMC impacts their attitudes about and whether they actually use CMC.

Table 4. A Selected List of Arguments about the Outcome of Computer-mediated Communications

References	Arguments
Outcome	
Fano (1984)	The author found that CMC had remarkable marked effects on communication efficiency, participation, interpersonal behavior, and decision making.
Gomez, Wu, & Passerini (2009)	In educational contexts, technologies that CMC uses may help to translate team-based learning activities into an online environment, which will have to address some issues that traditional classrooms encounter, such as time management and disruptions from latecomers.
Chan & Fu (2017)	A computerized medium may facilitate not only the communications between friends and work colleagues but also connect different dispersed users that share similar points of view in social and political issues.
Theocharis, Vitoratou, & Sajuria (2017)	CMC may play an important role in political mobilization by engaging dispersed, decentralized individuals to unite as a team, particularly in crises or when one needs voluntary power.
Blomqvist & Nordstrand (2018)	The rise of CMC may help virtual teams to form and their members to manage them and exchange ideas (particularly when members live in different regions). Virtual teams may also help save costs and increase productivity.

In short, CMC characteristics include synchronicity, recordability, and anonymity (McQuail, 2010; Haines et al., 2014). Adoption, system, technology, audience, social, and user factors largely impact CMC's mechanisms, which emerging technologies enable (Trevino & Webster, 1992; Lin, 2003). Further, CMC's anonymous nature fosters both participation and uninhibited behaviors (Siegel et al., 1986). In turn, CMC can enhance communication efficiency, interpersonal behavior, and decision making (Fano, 1984). These advantages of using CMC for online deliberation would help participants exchange information and ideas when discussing various social and political issues (Theocharis et al., 2017; Blomqvist et al., 2018).

MIM has emerged as a popular technology for CMC and has caught researchers' attention largely due to the Internet. More specifically, MIM refers to a messaging service that transposes the Internet desktop messaging experience to smartphones based on these devices' proliferation and social influence (Zhang et al., 2015). Comparing with SMS or other traditional message delivery methods, MIM offers real-time and reliable message delivery (Lou, Chau, & Li, 2005), supports diversified emotional icons (Chen & Siu, 2017; Tseng & Hsieg, 2018), provides higher accessibility with low cost (Church & de Olveira, 2013), supports group communications/collaborations (Church & de Olveira, 2013; Bouhnik & Deshen, 2014), and provides an environment that affords more social and natural interactions (Rambe & Bere, 2013; Lou, Chau, & Li, 2005). Moreover, the many different network technologies that now exist offer rich and personalized experiences (Au, Fung, & Tses, 2016; Tan, Tan, Lu, & Land, 2017), such as bots that automatically reply and polling (Chan, Hill, & Yardi, 2005). As a result, the number of MIM users has increased in recent years. For example, the number of WhatsApp user increased from 200 million at the beginning of 2013 (Park, Cho, & Lee, 2014) to 900 million in 2015 (Fernandes & Pinto, 2017). Further, in 2016, Telegram had only 100 million monthly active users (Fernandes & Pinto, 2017), but that figure doubled to 200 million in 2018 (Lomas, 2018). Many MIM applications can run on different operating systems such as iOS, Android, and Windows (Xu, Frey, Buckovac, & Ilic, 2015; Zhang et al., 2015), which allow users to communicate despite their preferred operating system (Isaacs, Walendowski, & Ranganathan, 2002). Further, smartphones' proliferation throughout society, which indicates that they have a considerable user population, has also fostered a range of different MIM applications. Table 5 compares major MIM applications (Buchenscheit et al., 2014; Statista, 2019; Zhang et al., 2015).

Table 5. Comparison of Mainstream Free MIM Applications

	WeChat	WhatsApp	Facebook Messenger	Line	Viber	Telegram
Number of subscribers	> 1.1 Billion	1.5 Billion	> 1.3 Billion	> 300 Million	> 260 Million	> 200 Million
Allow blocking other subscribers	Yes	Yes	Yes	Yes	Yes	Yes
With desktop client	Yes	Yes	Yes	Yes	Yes	Yes
Group chat maximum capacity (in number of users)	500	256	150	500	99	5000
End-to-end encryption	No	Yes	Yes	Yes	Yes	Yes
Display email or phone number?	No	Yes	Yes	No	Yes	No

Group communication functions in MIM encourage co-operation (Rambe & Bere, 2013), provide a supportive environment (Bouhnik & Deshen, 2014), allow real-time responses (Church & de Olveira, 2013; Rambe & Bere, 2013), create a sense of belonging and community, and break down social barriers (Doering, Lewis, Veletsianos, & Nichols-Besel, 2008; Sweeny, 2010). These characteristics, in return, enable many social and political actions, such as the Arab Spring and Jasmine Revolution in 2011 (Gordon, 2016). In milder situations, governments may use MIM to promote alternative views or other users may use it to undermine government narratives (Hellman & Wagnsson, 2015). However, when applying MIM in political contexts, some users may become very sensitive about security and privacy issues (Tsai & Men, 2018), especially since some governments may monitor the conversations or even arrest those who express alternative opinions via MIM (Harwit, 2017).

3   Research Methodology

We adopt the case research methodology with netnography for our study for several reasons. First, the case research method suits research that explores "how" research questions (Benbasat, Goldstein, & Mead, 1987; Dubé, & Paré, 2003) and processes that one cannot separate from their contexts (Rynes & Gephart, 2004). Second, as multi-dimensional phenomena with both social and technological dimensions, online deliberations involve too much complexity for an objective research approach (Koch & Schultze, 2011; Gable, 1994). Given that online deliberations may involve not only technical issues (from the tools they use) but also issues that pertain to subject matter (due to social or political content), a case study approach represents a suitable method to examine them (Klein & Myers, 1999).

Netnography refers to a written account that results from studying the cultures and communities that emerge from Internet-based communications where the traditions and techniques of cultural anthropology methodologically inform both the fieldwork and the textual interpretation (Kozinets, 1999). It can help one to obtain profound insights from a new experience (Langer & Beckman, 2005), such as online deliberations that use MIM, and to learn how users experience emerging products and services (e.g., Ma, 2014; Dehghani, 2018). As a type of ethnography, one may use it with other qualitative methods such as interviews and focus groups (Kozinets, 2002). In our context, given we primarily analyze users' activities in online conversations, netnography represents a particularly suitable option.

To select our case study target, we had two ideal conditions. First, we needed to consider a successful deliberation so that we could develop the theory based on proven, if not best, practices and, thus, guarantee that our study would theoretically and practically contribute to the literature (Pan & Tan, 2011). Second, we needed to select a deliberation that included a significant number of participants with a robust and influential power. Based on these conditions, we chose Project ThunderGo, an online deliberation campaign related to the 2016 Hong Kong Legislative Election as our study target. First, the campaign involved a wide level of public interest in Hong Kong and gained a historical turnout record (Au, Xu, Wang, & Fung, 2017) in particular due to the Causeway Bay Bookseller Disappearance (Kwong, 2016; Kellogg, 2018), accused threat to candidates from Beijing (Cheng, 2016), and candidates' disqualification controversy (Au et al., 2017; Lim, 2017) before the polling day. Second, the campaign's official post-deliberation report indicated that it attracted approximately 42,000 voluntary participants (equal to two percent of the registered voters who casted their votes). In all six constituencies that the campaign targeted for, the percentage difference of vote share between the last-elected candidate (the one who received the least number of votes among all elected candidates) and the first-defeated candidate (the one who received the largest number of votes among all defeated candidates) in five constituencies was less than one percent, which indicates that the deliberation influenced the election and contributed to achieving its initial objective. Third, many relevant news reports discussed its impact on the election that we could use as a rich information source to cross-examine our findings with the observations and reports from the public media. Therefore, Project ThunderGo fit our case-selection conditions.

3.1   Data Collection

We collected data using various data sources to include the voices of a comprehensive range of stakeholders for data triangulation and, thus, to more deeply understand online deliberations (Venkatesh, Brown, & Bala, 2013), to offer richer details to interpret the findings (Gable, 1994), and, thus, to ensure the case representativeness. Figure 1 shows campaign events and time points we collected data for.

The data sources we selected covered not only the participants so we could understand the deliberation itself but also the external reports and final results so we could to justify its outcome. We collected qualitative in either English or Cantonese with traditional Chinese characters (see Table 6 for details).
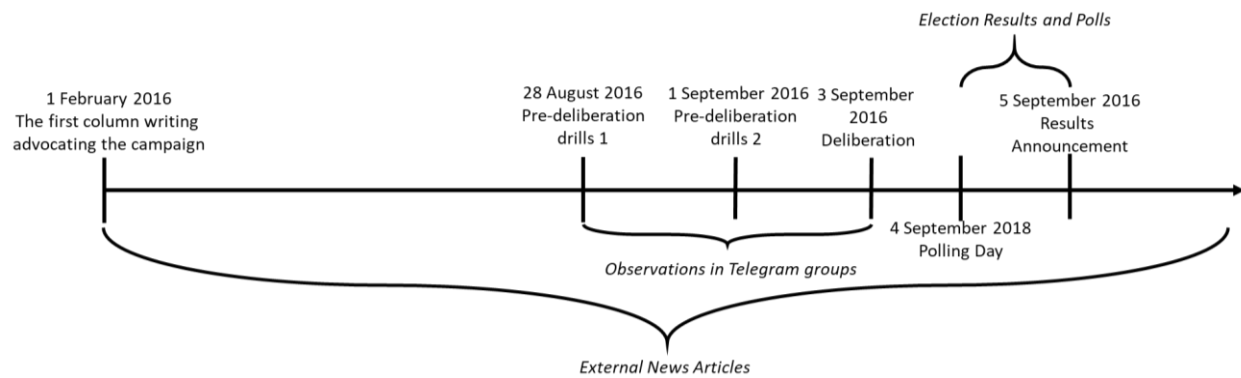
Figure 1. Timeline of Deliberation-related Events and the Time Points of the Data that We Collected

Table 6. Data Sources and Their Purpose

Data source	Purpose
Observations in Telegram groups	To learn about participants' behavior (primarily their discussion) and the host's responses, we observed the Telegram groups' pre-deliberation drills (On 28 August, 2016 and 1 September, 2016) and final deliberation (on 3 September, 2016).
External news articles (both printed and online media)	Given the deliberation concerned a major election in Hong Kong, related external news articles might reflect various stakeholders' responses and opinions in different stages. To ensure we covered different stakeholders' voices, we referred to the extant literature (e.g., Yung & Leung, 2014; Kwong, 2015) that discussed how these printed and online media (pro-Beijing or pro-Democracy) could facilitate our data collection in this study. Given that a column article on 1 February, 2016, first proposed the campaign, we used this date as the starting point to find and analyze relevant news articles.
Election results and poll	We compared the election results (announced on 5 September, 2016) with the final prediction based on the pre-election poll on 2 September, 2016, which the University of Hong Kong Public Opinion Programme (HKUPOP) conducted and received wide recognition in Hong Kong (Chung, 2016), based on the rationale that comparing its final prediction and the final election results could indicate the deliberation's impact.

3.2 Data Analysis

We analyzed the data as we collected it to take advantage of the case research method (Eisenhardt, 1989). Based on our literature review, we arrived at a set of theoretical dimensions and second order-themes that served as initial theoretical lens for data analysis. Altogether, we developed three theoretical dimensions and 10 second-order themes (see Table 7). We coded the data collected using a mix of open, axial, and selective coding (Strauss & Corbin, 1998). More specifically, we used open coding to identify new, and validate existing, theoretical dimensions (e.g., outcome and processes), while we used axial coding to identify new and validate existing second-order themes under those dimensions. Afterwards, we used selective coding to distil our case evidence into several first-order concepts, which we classified according to the appropriate themes and dimensions (Dacin, Munir, & Tracey, 2010).

At the point when we found changes or new insights that we could bring into the emergent theory, we used visual-mapping strategies and narrative strategies to summarize our findings (Langley, 1999). In our data analysis, visual maps involved documenting the emergent theory in forms of diagrams, while we used narratives to construct a story that represented our understanding about what happened. Further, we also applied data triangulation (Klein & Myers, 1999) by cross-referencing multiple data sources to ensure our data's consistency and findings' comprehensiveness (Patton, 1999). We continued using the visual maps and narratives for building the emergent model until we reached the point of theoretical saturation (Glaser & Strauss, 1967), which means our model comprehensibly accounted for the case data and we no longer gained new insights (Eisenhardt, 1989).

Table 7. Theoretical Dimensions and Second-order Theme Developed

Theoretical dimensions	Second-order themes
Deliberation	Motivations (Albrecht, 2006; Baek et al., 2012) Tool design (De Munck & Ferreras, 2012; Semaan et al., 2015) Processes (Bächtiger & Wyss, 2013; Suh et al., 2018) Outcome (Xiao & Askin, 2014; Friess & Eilders, 2015)
Computer-mediated communication	Characteristics (McQuail, 2010; Haines et al., 2014) Processes / mechanisms (Lin, 2003; Brown et al., 2004) Outcome (Theocharis et al., 2017; Blomqvist et al., 2018)
MIM characteristics	Design consideration (Bouhnik & Deshen, 2014; Church & de Olveira, 2013) Functions (Isaacs et al., 2002; Zhang et al., 2015). Capacity (Buchenscheit et al., 2014; Tsai & Men, 2018)

4   Case Findings and Description

4.1   Background

Proposed in early 2016, Project ThunderGo (雷動計劃, also known as the Thunderbolt Plan) sought to achieve an anti-establishment camp majority in the 2016 Hong Kong Legislative Election via strategic voting (i.e., by having voters support another candidate more strongly than their sincere preference). It recruited anti-establishment camp supporters to participate in the pre-election deliberation and, thus, to come up with a set of final strategic voting instructions based on the election polls, while, in neck-and-neck scenarios, participants made the final decision in order to secure marginal anti-establishment candidates (Fung, 2016).

In the Hong Kong Legislative Council (LegCo), there are 35 Functional Constituencies (FC) seats and 35 Geographical Constituencies (GC) seats. However, only the GC seats are elected in universal suffrage mean (Cheung & Ng, 2014). Further, 35 GC seats are allocated to five constituencies across Hong Kong, which includes Hong Kong Island (HKI), Kowloon East (KE), Kowloon West (KW), New Territories East (NTE) and New Territories West (NTW). Each constituency has five to nine GC seats. For the FC seats, only a limited number of voters from a set of pre-defined "professional" areas could run and vote except for five FC seats listed as the District Council (Second) Constituency (DCII) and known as "super seats". Voters not in the pre-defined "professional" areas or registered in these "professional" FCs but who opted not to vote in their "professional" areas could vote in DCII. As a result, DCII had the largest number of FC voters (which covered 91.9 percent of the registered voters). While both DCII seats and GC seats are elected via the proportional representation method, only the first candidate in a list has had a chance to be elected since 2012 because too many party lists have competed for only a few seats (Ma, 2014; Yip & Yeung, 2014).

Traditionally, most candidates or parties in the election come from the two main political ideology camps in Hong Kong: the pro-democracy camp and the pro-Beijing camp (or known as pro-establishment camp). However, after the Umbrella Revolution (also known as the "Umbrella Movement"), some political parties and activists who advocated for Hong Kong independence emerged (Lim, 2015, 2017). The public have sometimes collectively referred to these parties and the pro-democracy camp as the anti-establishment camp (Ma, 2017; Wong & Chung, 2016). FCs have resisted the anti-establishment camp from getting a majority in LegCo even though the anti-establishment camp has gained more popular votes since most of the voters from the FC's pre-defined "professional" areas had a strong business or political ties with China (Ma, 2014; Kaeding, 2017).

4.2   Proposing and Founding the Campaign (February to May, 2016)

Benny Tai, the individual who proposed the campaign, openly published an article in February, 2016, in which he pointed out the possibility for the anti-establishment camp to obtain a majority in the election and the need of "defend by attack" given the political situation and previous election failures (Ng, 2016; Tai, 2016). He suggested having primaries and deeper collaboration in the camp, but many political parties and individual members of the camp expressed skepticism about the feasibility of getting a majority in the election (Hon, 2016; Ng & Fung, 2016). Eventually, the campaign decided to recruit anti-establishment voters to join the pre-election deliberation and came up with the final strategic voting instructions based on

the election poll and deliberation results for neck-and-neck scenarios in order to secure the marginal anti-establishment candidates (Fung, 2016). Having confirmed the deliberation-driven nature of the campaign, a core team was formed with the support of a few social movement groups and individuals in terms of various capabilities and resources, such as information systems professional knowledge for establishing the deliberation systems and manpower to promote the campaign.

4.3 Preparing for the Campaign (May to August, 2016)

The campaign began recruiting participants after the core team was formed. The core team used Facebook pages (including the campaign official page and the pages of the supporting organizations), crowdfunding, participants' referrals to their friends or relatives, advertisements in printed media, and hand-distributed flyovers on street and pro-democracy demonstrations. Among the recruited participants, some became volunteers that supported the core team on top of solely participating in the campaign. After the election ended, some volunteers indicated that they initially worried about the severe fragmentation of the anti-establishment camp, the possibility of a pro-establishment camp supermajority (Cheung, 2016), and Beijing's intervention in the election (Cheng, 2016). Some of the volunteers also found difficulty in choosing an anti-establishment candidate to help (Baek et al., 2012). In response to these possibilities, the volunteers considered the campaign as a solution (The Stand News, 2016).

Online deliberation hosts need to address various technical issues, such as selecting a suitable MIM application. They need to consider privacy issues (Buchenscheit et al., 2014), how many individuals the MIM application's group chat function can accommodate (Towne & Herbsleb, 2012), and the MIM's popularity (to lower the technological barrier) (Davis, 1989). Among different popular MIMs, Viber lacked support for group chat, while fraud incidents hindered LINE's security (Pang, Leung, & Hung, 2014). Further, despite WeChat's popularity, the Chinese Government reportedly monitored it (Harwit, 2016), and many overseas government agencies had banned it (Chen & Deng, 2018). WhatsApp was more popular than and as secure as Telegram, but Telegram supported a larger group of participants and different bots for extending the functionality (van Schie, 2015). Subsequently, the core team chose Telegram as its MIM for conducting the deliberation (Thomas, 2013; Xu et al., 2015). Based on Telegram, the team developed a bot called VotSonar that would facilitate the deliberation and deliver messages to the participants (Lam, 2016).

Online deliberation hosts also need to ensure they establish rules for the deliberation to ensure equal participation (Friess & Eilders, 2015) and a constructive atmosphere (Habermas, 1989). The core team agreed that the deliberation should include no personal attacks, no foul language, no personal information, and no discussion about unrelated topics (Bächtiger & Wyss, 2013; Friess & Eilder, 2015).

After selecting Telegram and establishing rules, the core team had to work on ensuring participants' familiarity with the tool (Lu, Liu, Yu, & Yao, 2014) and that the system worked properly in the deliberation. Therefore, the team conducted two pre-deliberation drills on 28 August and 1 September, 2016, to allow participants, volunteers, and core team members to familiarize themselves with the deliberation's rules and mechanisms and for the core team to find and solve any potential problems. Considering the huge number of participants and the number of core team members, the core team decided that they would put participants into different groups based on their self-reported geographical constituency. Each group had approximately 100 participants, while the same GC had multiple groups.

During the drills, the participants not only became familiar with the platform but also discussed different election-related topics, such as their prediction and expectation of the overall election outcome. The participants found a limited number of saboteurs in the rehearsal who constantly posted irrelevant messages and stickers to disrupt the discussion between the participants. The hosts isolated them to the specific groups without informing them during the final deliberation to prevent their further obstruction (see Figure 2 for their obstructive behavior).
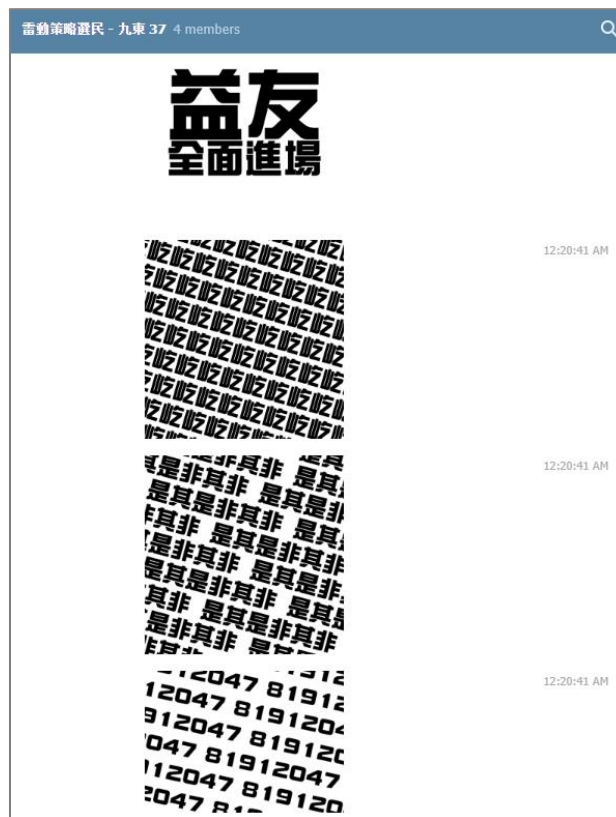
Figure 2. Saboteurs' Behavior in the Deliberation

4.4   Deliberating for the Decision (3 September, 2016)

The final deliberation had the same groups as the pre-deliberation drills. Before the deliberation started, the core team sent the rules to the participants again to ensure an effective deliberation. The core team provided different information about their analysis to facilitate the decision-making processes (De Munck & Ferreras, 2012), which relied on participants' previous reflection and the election polls. Further, the deliberations allowed participants to vote so as to quantify their will and ensure they all had their say (Friess & Eilders, 2015).

The deliberation had two sessions (the first for the DCII and the second for the respective GCs). Each session began with an announcement about the proposed voting instructions, which relied on the HKUPOP final election poll announced on 2 September 2016, with adjustments based on the core team's electoral analyses.

The campaign had more than one secure target for KW, HKI, NTE, and DCII. The deliberation recommended an even split of the strategic votes among the targets and asked the participants to divide the responsibility for securing different targets. To choose a candidate, the participants would click on the name of their choice.

Figure 3 shows one of the discussion groups (called "Project ThunderGo Strategic Voters—KE Area 37") for voters in KE. The part of the conversation displayed in the figure relates to the division of work for DCII. We translate the messages into English below the figure. Note that the numbers next to each candidate's name represents how many participants voted for the candidate, while the instant voting results were visible to all participants. A participant could click one of the buttons below to vote for their preferred candidate. While participants in the same GC might be separately different discussion groups, the voting figures combined all related voters in different discussion groups.
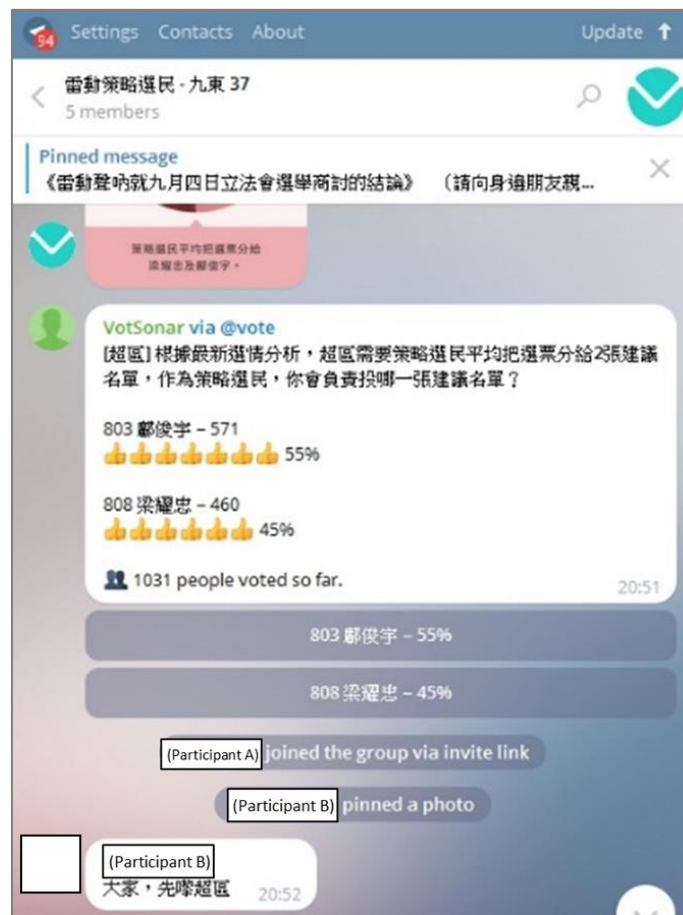
Figure 3. Voting and Responsibilities Sharing in the Deliberation

VotSonar via @vote: [Super seat] Based on the latest election analysis, votes need to evenly distribute their votes to the following two tickets. As a strategic voter, please report which ticket you will vote?

803 Roy KWONG: 571 (55%)

808 LEUNG Yiu Chung: 460 (45%)

1031 people voted so far.

803 Roy KWONG (55%)

808 LEUNG Yiu Chung (45%)

(Participant A): joined the group via invite link

(Participant B): pinned a photo.

(Participant B): Let's first discuss the super seat.

The campaign had only one secure target for KE. The core team asked the participants if they would agree with the voting instruction, and 79 percent of them agreed. For NTW, the HKUPOP election poll indicated that four marginal candidates had similar support, but the analysis based on polls and earlier election results indicated that the campaign could secure only two seats. The participants in NTW had to choose one among these four candidates, and the campaign would select the two candidates with the highest votes as the secure targets. The Votsonar bot we mention above enabled all the voting and division of work.

After the deliberation, the core team made a final voting instruction and pinned it in the groups based on the results. We translate the voting instructions into English as follows:

Votsonar's strategic voters of different constituencies made the following decisions:

Super seat: Strategic voters will distribute their votes equally to KWONG Chun-yu and LEUNG Yiu-chung.

Kowloon East: Supporters of Jeremy TAM and WU Chi-wai will continue to vote for them. Other strategic voters will all support Tam Tak-chi (aka Fastbeat).

Kowloon West: Supporters of WONG Pik-wan will continue to vote for her. Other strategic voters will distribute their votes equally to Claudia MO, LAU Siu-lai, and YAU Wai-ching.

Hong Kong Island: Supporters of Tanya CHAN will continue to vote for her. Other strategic voters will distribute their votes equally to HUI Chi-fung and LAW Kwun-chung (aka Nathan).

New Territories East: Strategic voters will distribute their votes equally to LEUNG Kwok-hung (aka Longhair), LAM Cheuk-ting, CHEUNG Chiu-hung, Gary FAN, and Raymond CHAN (aka Slowbeat).

New Territories West: Supporters of Andrew WAN, CHENG Chung-tai, and Eddie CHU will continue to vote for them. Other strategic voters will distribute their votes equally to KWOK Ka-ki and WONG Ho-ming.

Similar to the pre-deliberation drills, we found heated discussion about different election-related topics and canvassing. Figure 4 shows one of the discussion groups (called "Project ThunderGo Strategic Voters – NTW Area 68") for voters in NTW.
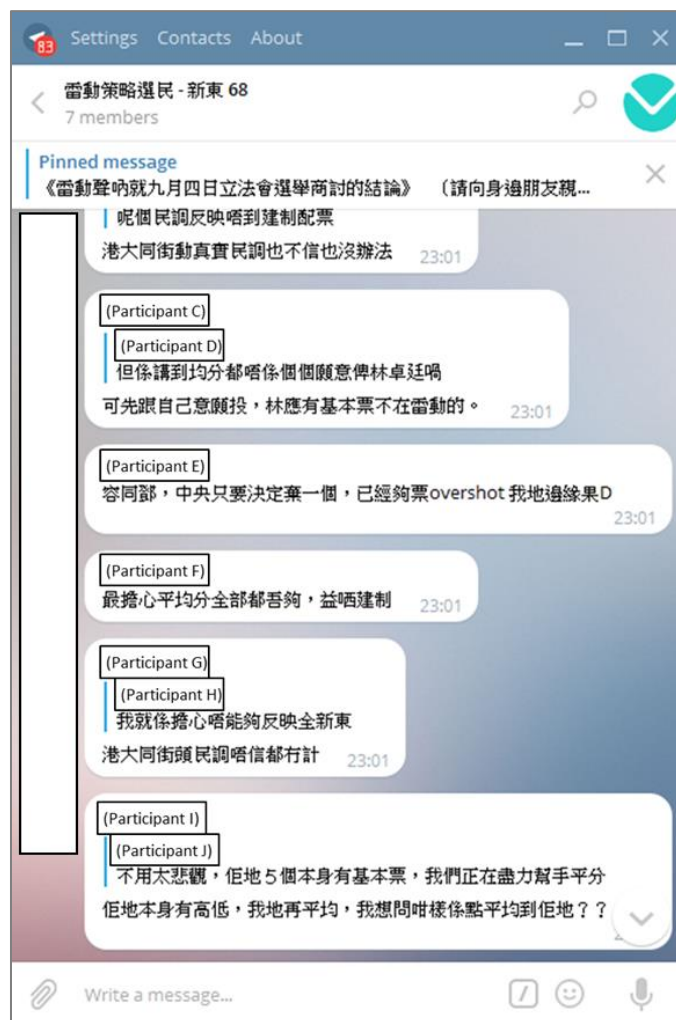
Figure 4. Discussion in Deliberation: Primarily Related to the Worries on the Marginal Candidates

In English, the information in Figure 4 reads as follows:

Project ThunderGo Strategic Voters—NTW Area 68:

(Participant G): "The polling here cannot reflect the pro-establishment camp's voting strategy." There is no way if you do not believe the real polling results obtained from the HKUPOP and other sources.

(Participant C): "(Participant D): You suggest to distribute the vote of strategic voters evenly, but not all of us like LAM Cheuk-ting."

Vote according to your own wish. LAM has his own supporters who are not participating in Project ThunderGo.

(Participant E): If the pro-establishment camp reduces its support to one of the two marginal candidates (YUNG or TANG) and put the full support to only one of them, then they would be able to overshoot all our marginal candidates.

(Participant F): I am worried that if we equally split the votes, none of our candidates would have enough vote and the pro-establishment camp will be winning all for sure.

(Participant G): "(Participant H): I am worried that our polling cannot reflect the real situation in NTE."

There is no way if you do not believe the real polling results obtained from the HKUPOP and other sources.

(Participant I): "(Participant J): No worries. All these five marginal candidates have their own supporters. What we do is to even out our votes to help them".

They have different levels of support from the public. If we even out our votes, it still would not help.

4.5   Implementing the Decision on the Polling Day (4 September, 2016)

After the deliberation, the public widely distributed and discussed the decisions (Tam & Fung, 2016; Post852, 2016). To ensure that the participants facilitated the implementation of the deliberation results, the VotSonar bot continued to serve as the campaign's communication tool.

The polling station opened at 7:30 a.m. and closed at 10:30 p.m. The campaign asked strategic voters who had voted earlier to report their final choices by 6 p.m. to encourage the remaining voters to support those who received less strategic votes and, thus, to ensure an even split of the strategic votes among the chosen targets (see Figure 5).

Figure 5. Reporting at 7:30 p.m. on the Polling Day

In English, the information in Figure 5 reads as follows:

> ***Updated position for strategic voters as at 7:30 p.m.***
>
> *Based on our data collected from 27,830 valid reports on voting related to the super seat candidates:*
>
> *LEUNG Yiu-chung: 6,884 (33.3%)*
>
> *KWONG Chun-yu: 13,752 (66.7%)*
>
> *We suggest the strategic voters to equally split their votes to these two candidates.*

At 8 p.m., the campaign distributed the final voting instructions based on the statistics, such as participants' report and turnout, to the strategic voters who had not yet voted to focus the votes on the hopefuls at the marginal position and to ensure an even distribution of the tactical voters. While the campaign initially abandoned Li Cheuk-Yan, it temporarily decided to include him as a secure target owing to a higher-than–expected turnout (see Figure 6 for the message from the Telegram bot).
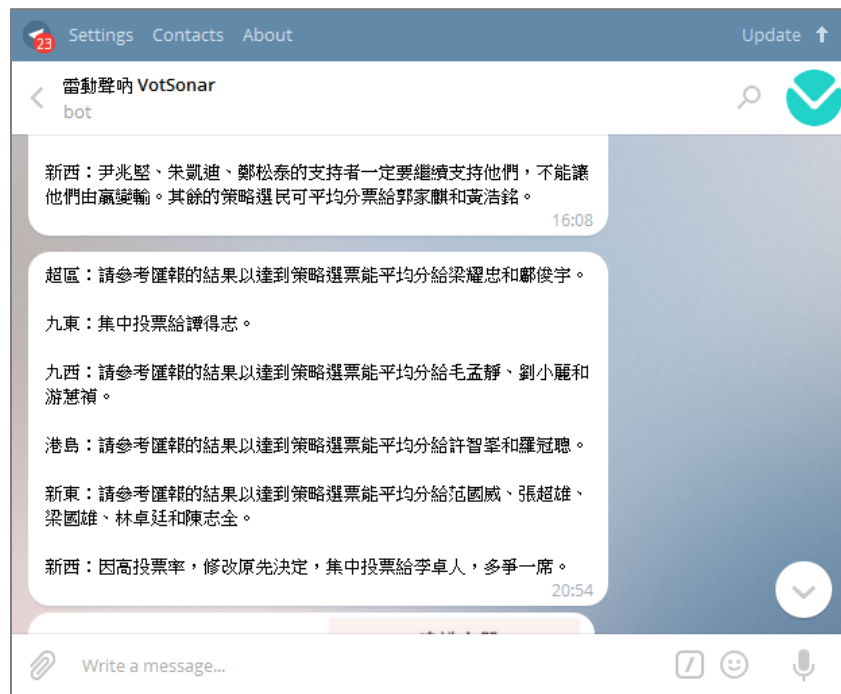
Figure 6. Urgent Voting Instructions Amendment to add Li Cheuk-Yan as the Secure Target

In English, the information in Figure 6 reads as follows:

> *VotSonar:*
>
> *Super seat: Please follows our report and equally split your votes to LEUNG Yiu-chung and KWONG Chun-yu.*
>
> *KE: Please focus to vote for Tam Tak-chi.*
>
> *KW: Please follows our report and equally split your votes to Claudia MO, LAU Siu-lai, and YAU Wai-ching.*
>
> *HKI: Please follows our report and equally split your votes to HUI Chi-fung and LAW Kwun-chung.*
>
> *NTE: Please follows our report and equally split your votes to Gary FAN, CHEUNG Chiu-hung, LEUNG Kwok-hung, LAM Cheuk-ting, and Raymond CHAN.*
>
> *NTW: Due to high voter turnover, we change our strategy. Please focus to vote on Li Cheuk-Yan and hoping for getting one more seat.*

Eventually, the anti-establishment camp won 30 seats in total with 19 seats in GC and three seats in DCII. Further, 12 out of 15 secure targets won the election (Tong, 2016). Despite not meeting the initial campaign target, the camp gained three more seats than the election poll prediction (HKUPOP, 2016). Yet, overall, members in the anti-establishment camp provided controversial feedback. Some anti-establishment candidates criticized the campaign for "doing bad things with a good heart" (HK01, 2016) by ruining their electioneering and putting many candidates at risk (Ng & Cheung, 2016; Yuen, 2016). Some critics challenged the representativeness, transparency, and scientificity of the campaign's outcome and processes and also criticized the campaign's adopting Telegram as creating a "digital divide" (Lo, 2016; The Stand News, 2016). Some anti-establishment candidates who initially secured their election won only marginally at the end because too many voters focused on securing the marginal candidates and, thus, voted strategically but tended to ignore the candidates that they should have "continue[d] to vote for" (The Stand News, 2016). On the other hand, some elected candidates recognized the campaign (i-Cable, 2016; Yeung, 2016) and called for a similar plan in the future to confront Beijing's intervention (Au, 2016).

Individuals outside the anti-establishment camp also had a strong reaction to the campaign. Some Beijing-loyalist political leaders and pro-Beijing media attacked it for "twisting the voters' intention", "controlling the election" (Li, 2016), "harassing the voters", "harming the electoral mechanism" (HKET, 2016), and harming the fairness of the election as "a front group of pro-democracy camp" (Leung, 2016a). Some also condemned Benny Tai, the individual who proposed the campaign, for creating chaos in Hong Kong (DotDotNews, 2017) and launched complaints against him for offending the electoral regulations in the relevant government department and legislative council (Chan, 2016). Christine Fong (also known as Fong Kwok-Shan), who was a centrist candidate and narrowly lost in the election, highlighted that the way the campaign allocated votes caused her election failure and that it harm the rights of voters who emphasized livelihood issues over political or constitutional issues (Leung, 2016a). Ricky Wong (also known as Wong Wai-Kei), another centrist candidate who narrowly lost in the election, shared a similar point of view with the critics from the pro-democracy camp. He said: "any professors will tell you that his plan is not professional at all" (Leung, 2016b).

In late 2016, the Hong Kong Government made a submission to the LegCo, which included suggestions to shorten the opening time of polling stations and to introduce an election-silence period before the voting day, in which it proposed banning election polls and electioneering. Many saw such suggestions as a response to the strategic voting that the campaign promoted (Kam, 2016; Lam, 2018).

5   Discussion

5.1   Theoretical Implications for Online Deliberation: BEAR Model

We considered not only the deliberation itself but also the effort before and after the deliberation and found that we could present the activities of the deliberation campaign in a four-stage model. This model may help researchers to answer previous questions about the impact that different forms of online political participation have on decision making and the e-democracy model (Päivärinta & Sæbø, 2006). The model also provides step-by-step guidelines to help others implement online deliberations. We call the model the "BEAR model of online deliberation" based on how we name each stage (see Table 8).

To begin with, individuals should form a core team by finding groups and other individuals with common ground and ideally with the needed resources and capabilities. Yet, sharing common ground does not automatically mean that individuals share knowledge or a similar point of view on what actions to take. Some may express skepticism about or consider the deliberation approach as not feasible or ideal (Sanders, 1997; Davis, 1999), which may impose a major challenge in this stage. As a result, the deliberation may need to clarify certain points and persuade different stakeholders in response to their concerns. For example, initiators may highlight online deliberation's advantages, such as better efficiency (Gomez et al., 2009) and its ability to connect geographically dispersed participants (Blomqvist & Nordstrand, 2018).

Table 8. The Four-step BEAR Model of Online Deliberation

Stage 1: building the core team	Stage 2: engineering the deliberation	Stage 3: arriving at the decision	Stage 4: reaching the target
Antecedent conditions			
To address a major issue with stakeholders	To engage more participants and test the system	To deliberate on the subject matters	To reach the target based on the decision made in the deliberation
Related activities			
Team building • Engaging the groups and individuals with similar vision and common ground • Clarification and persuasion	Technical preparation • Select tools • Test system • Conduct deliberation drills Non-technical preparation • Recruit participants • Set rules • Conduct rehearsal	Core team actions • Moderate the discussion • Provide information and options • Exclude the sabotage Participants' actions • Present arguments • Consider others' arguments • Vote based on given choices	Action and feedback • Implement deliberation decision • React to external changes
Major challenges			
• People feel hesitant to participate as they do not understand the idea of online deliberation.	• Balance technical needs and users' habits	• Fully implement deliberation rules	• Address the negative impacts due to unpredictable events
Developmental outcomes			
• Core team established	• More participants engaged • Rules established and made known to the participants	• Decision made that participants and possibly non-participants need to follow	• The desired outcome of the deliberation reached

After its formation, the core team should focus on preparing for the deliberation in both technical and non-technical aspects (Lin, 2003). The technical preparation includes selecting and testing systems. To select a system, the core team needs to consider security issues, whether it can extend the system (e.g., to include additional dynamic features and help participants disseminate information), whether to adopt a cross-platform MIM, and whether the system can accommodate a large number of participants. The core team should select a cross-platform MIM since it may enhance accessibility, transparency, navigability, usability, and adaptability (Samuel, 2004; Semaan et al., 2015; Towne & Herbsleb, 2012) and ensure participants have a better experience (Trevino et al., 1992). Further, the core team should also consider if the system allows participants to remain anonymous since some users may not want to let others know about their participation (Haines et al., 2014). Therefore, the balance between technical needs and users' habits represents a major challenge in this stage. Based on the system the core team selects, the core team should test it to detect the bugs and potential problems and to ensure that it operates effectively and efficiently in the final deliberation (Ma et al., 2013). Thus, considering the importance of both privacy and security issues, both technical and non-technical core members should have the sense of information security (Au & Fung, 2019).

The non-technical preparation includes recruiting participants, setting rules, and rehearsing the deliberation. The core team may recruit participants via both online and offline means; doing so via online means reflects CMC's power to connect dispersed people with the similar point of view who did not know one another before (Chan & Fu, 2017; Theocharis et al., 2017). Individuals who feel affected by or interested in the issue at hand (Baek et al., 2012) may join the deliberation or may even become a volunteer. In both the first and second stages, the deliberation's processes require that participants share a common ground (Bächtiger & Wyss, 2013). On top of the recruitment issues, the deliberation should follow several basic principles: to treat everyone equally (Friess & Eilders, 2015), to build a constructive atmosphere (Habermas, 1996) and to minimize off-topic discussion (Trenel, 2004). Further, the host may also allow participants to vote for some given choices so as to quantify their will (Fishkin et al., 2000). The host may also consider conducting pre-deliberation drills to ensure a smooth final deliberation, to reduce

participants' anxiety (Brown et al., 2004), and to better ensure that participants acknowledge the rules and have clarity about their tasks (Tolmie & Boyle, 2000), and to identify and isolate the saboteurs to ensure a constructive atmosphere. In the case we examined, the sabotage behaviors that the core team found aligned to some extent with previous findings related to the increase of uninhabited behaviors in CMC (Siegel et al., 1986).

In the final deliberation stage, the core team should provide information and options (De Munck & Ferreras, 2012), moderate the discussion, and exclude the saboteurs. Other participants may present their own arguments, clarify others' enquiries, consider others' arguments, and, eventually, reach a decision (Trenel, 2004; Friess & Eilders, 2015). Participants need to exchange opinions (Walther, 1996) since deliberation should not only comprise individuals' expressions without interactions between them. In this stage, we found that the major challenge relates to the fully implementing the deliberation rules. For example, it can be hard to fully suppress off-topic discussion. A rigid suppression may harm the atmosphere, but ignoring such discussion may hinder decision-making efficiency. An ideal approach involves reacting only when it impedes the deliberation. However, hosts and moderators should still spend their best effort to maintain the deliberation and to make the final decision.

After making the decision, the participants and the core team should collectively implement it (Stiggelbout et al., 2012). Without effectively implementing the decision, the deliberation wastes everyone's efforts. The participants should act in accordance with the decision made and possibly report to the core team, while the core team may need to react to feedback, other external changes, or even critics (since the deliberation may receive critics and attacks from external stakeholders, particularly those who do not agree with the deliberation's objectives). The external incidents may impose the largest challenge in this phase since these incidents can be entirely unpredictable and may negatively impact the outcome.

5.2   Theoretical Implications for Computer-mediated Communication (CMC) and Mobile Instant Messengers (MIM)

Our findings indicate how one can use CMC for more moderate social and political actions (Theocharis et al., 2017) on top of the relatively radical protests or revolution such as Arab Spring in 2011 (Gordon, 2016) and Umbrella Revolution in 2014 (Lee, 2015; Tsui, 2015). In our case, MIM helped individuals form a virtual team whose members shared a similar vision and mission (Blomqvist & Nordstrand, 2018). These individuals' deliberations played a significant role in some constituencies in the 2016 Hong Kong Legislative Election. Considering the power of online deliberation, social and political campaigners may use MIM for online deliberation to gain more power. To help individuals exchange their opinions in online deliberations that use MIMs, hosts need to implement rules so that participants do present not only their own arguments but also consider others' opinions with proper responses so that they can all form a consensus.

Another implication concerns the role that plugins and extensions in MIM applications play in facilitating communication and post-discussion actions in both political and non-political contexts (Chan & Fu, 2017). For example, a voting plugin can help participants choose a secure target and divide work, while bots may serve as a channel to distribute official information. Taking the workplace context as an example, plugins and extensions for MIM applications may help workers more efficiently and effectively make decisions and implement discussion outcomes.

We also argue that, when individuals use an MIM application for other discussion contexts such as online focus groups (Stewart & Shamdasani, 2017), the hosts need different measures for engaging the targeted audience, setting the rules, preparing the participants and possibly implementing the final decision. Letting the users to become familiar with the chosen MIM application before using it would lower the technology barrier, better prepare users, and, thus, enhance how easily participants perceive it to use (Davis, 1989; Trevino & Webster, 1992).

6   Conclusion

6.1   Limitations and Further Research Directions

Our study has several limitations. First, our research design relied on a single case study. While we chose a relatively successful case, researchers have commonly criticized the approach for generalizability (Walsham, 2006). Variance may exist in deliberations in other contexts, but we contend that our study has value to such contexts based on analytical generalization (Yin, 2003) given that we develop step-by-step guidelines and other theoretical implications that align with earlier studies in online deliberation (e.g., offsetting rules and dividing work after decision making). Further, we illustrate new issues and activities in online deliberations, such as recruiting participants before the deliberation, isolating saboteurs, and responding to external stakeholders. Given many early studies have lacked empirical evidence, we narrow down the related research gaps by providing real case evidence. Still, we acknowledge that further studies on different online deliberations may test the boundary conditions of our model and, thus, lead to a more generalized image of online deliberations.

Another limitation concerns the digital divide in online deliberations, which research related to technological adoption has frequently highlighted (Fu, Wong, Law, & Yip, 2016; Sauer & Willcocks, 2002) and a post-campaign interview in our case also mentioned. With reference to Davis (1989) and van Dijk and Hacker (2003), we recommended future similar deliberation to focus more on teaching prospective elder participants who are not familiar with the tools in order to narrow the digital divide, particularly in an online deliberation's earlier stages. In future case studies on online deliberation, researchers may investigate measures to narrow down the digital divide based on other empirical evidence and possibly the role that other cultural factors play in any e-politics initiative similar to the online deliberation in our study (Olasina & Mutula, 2015).

6.2   Practical Implications

Our work has several practical implications. First, our work suggests that online deliberations that use MIM applications can allow their hosts to update instructions more efficiently and, thus, ensure a more effective decision implementation. We provide guidelines for such adoption by indicating the issues and challenges that hosts may encounter when hosting an online deliberation. We also demonstrate different hosting stages of the online deliberation, including the antecedent conditions, related activities, and development outcome of each stage. Our results can serve as a foundation for formulating concrete, if not step-by-step, guidelines for the hosts and moderators of online deliberation in the future so that they can make the most of the efforts and resources invested in hosting deliberations and extend the benefits of them to a broader base of stakeholders with common ground.

Second, future developers may enhance the functions of MIM applications by upgrading them or introducing new extensions so that they become more powerful in different areas (e.g., as an online deliberation tool). After the upgrades and updates, the developers may test the new or modified functions to investigate their role in and impact on online deliberations.

Finally, while social and political campaigners may conduct online deliberations in MIM, we argue that governments may also consider conducting online deliberations similar to how they use social media to engage with citizens in other contexts (Ho, Yu, & Lai, 2014). Given its ability to engage larger populations (Cappella et al., 2002), allow people to exchange opinions (Min, 2007), and allow people to make better and more legitimate decisions (Friess & Eilders, 2015), online deliberations may constitute a less bureaucratic means for governments to understand different stakeholders' views (particularly about controversial issues).

We emphasize that we make no judgment about the legitimacy, motivation, or agenda regarding the chosen online deliberation. Rather, we chose this case solely due to its impact on the subject matter rather than because we share any common point of view with the deliberation or its initiators. After all, we illustrate a step-by-step guide for conducting online deliberation that practitioners may follow and present some implications for applying mobile instant messaging applications. In the end, we hope our findings help deliberation hosts conduct better online deliberations and, thus, allow more people to enjoy the benefits from participating in them.

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