To Speak or Not to Speak:
Predicting College Students' Outspokenness
in the Pro-Democracy Movement in Hong Kong

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This study applied the spiral of silence theory to examine college students' willingness to speak up about the pro-democracy movement in Hong Kong in both offline and online scenarios. The results largely confirmed the spiral of silence effect in the offline scenario, but not in the online scenario. The findings also suggested that, instead of considering the opinion climate of the general public as a whole, perceived opinion congruency with the peer group positively affected students' outspokenness in the offline setting. Other well-established influencing factors, such as fear of isolation and the awareness of consequence, were confirmed in the offline context as well. Moreover, alternative media exposure positively predicted one's willingness to speak up in both online and offline scenarios. Finally, the applicability of the spiral of silence hypothesis to cyberspace was discussed.

Keywords: spiral of silence, outspokenness, social movement, alternative media, Hong Kong

Being outspoken about political or public issues is typically considered beneficial in a civil society (Habermas, 1989). It is generally believed that public expressions serve as an important form of civic participation, leading to deliberative democracies (e.g., Esarey & Qiang, 2008; Janssen & Kies, 2005; Wright & Street, 2007). For four decades, scholars have employed the framework of the *spiral of silence* to investigate how willing individuals are to speak up on controversial issues such as abortion, the death penalty, and gay rights (e.g., Baldassare & Katz, 1996; Hayes, Shanahan, & Glynn, 2001; McDevitt, Kiousis, & Wahl-Jorgensen, 2003; Salmon & Neuwirth, 1990). Although not without its critics, it remains a

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prominent perspective for looking into individuals' willingness to express their opinions on controversial and often morally value-laden issues (Petrič & Pinter, 2002).

The 2014 pro-democracy movement in Hong Kong, also known as the Umbrella Movement or Occupy Central, attracted worldwide attention for some time. It was a civil disobedience movement calling for universal suffrage for the election of the chief executive of Hong Kong in 2017. It began on September 28, 2014, and lasted for more than two months. At the outset, the pro-democracy movement had, by and large, received much support from the public for its significance in making history; however, as time went by, some started to worry that the lingering Occupy Central protest might inconvenience residents in the neighboring area and cause an economic downturn over the longer term. Public opinion was divided (e.g., F. Fung, Woodhouse, Ngo, & Nip, 2014; C. Lau & Zhao, 2014).

As the spiral of silence theory stipulates, individuals' perception of the majority public opinion motivates their willingness to express political opinions (Noelle-Neumann, 1974, 1993). The perception of one's views as majority or minority may encourage or discourage outspokenness in public. In view of recent protests in Hong Kong, this study aims to investigate whether the spiral of silence effect would occur among the university students, who are the backbone of the Umbrella Movement. Hong Kong people used to be considered "attentive spectators" (S. Lau & Kuan, 1995, p. 3), as they were highly attentive to the political world but rarely participated in politics. Recent social movements appear to have changed that outlook, however; some even consider Hong Kong a city of protests in the 21st century (Chiu & Lui, 2000; Lam, 2004; F. L. Lee, 2010). Moreover, while many have argued that youths often distance themselves from politics in the Internet age (Armstrong, 2005), others have suggested that the young generation remains engaged through the form of digital activism (Denning, 2001; Yang, 2013). It is thus our hope to investigate university students' outspokenness and its antecedents in both online and offline settings. Our findings contribute to existing knowledge by extending the spiral of silence theory to novel social contexts and communication channels. Practically, this study offers insights into the extent to which new media as a tool may effectively advance a civil society.

Literature Review

The spiral of silence hypothesis was proposed by Noelle-Neumann in 1974. It states that, on a controversial issue, people will evaluate the opinion climate before they decide whether to express their own ideas. In other words, they will scan the environment and compare their own opinion against the predominant view of the issue. Due to fear of isolation, those who perceive themselves to be in a minority position, or in a majority position that is losing ground, will keep silent (Noelle-Neumann, 1974, 1993). The theory is based on the social comparison tradition (Kennamer, 1990) and links public opinion to social context (Hayes et al., 2001). Notably, in this line of research, while scholars often examine why people are not willing to express their opinions when they feel they belong to the minority camp, others have investigated why some individuals do speak up on a controversial topic. Outspokenness refers here to individuals' willingness to take a public stand and speak their opinions on controversial issues (Lasorsa, 1991).

The Spiral of Silence Effect in Online vs. Offline Scenarios

Traditional spiral of silence research typically examines individuals' expressions of opinion by asking whether they are willing to be interviewed by reporters or speak to a stranger on a long train journey (e.g., Lasorsa, 1991; Willnat, 1996). Recent studies, however, have begun to investigate the extent to which the phenomenon can occur online. An empirical study by Liu and Fahmy (2011) on the legalization of same-sex marriage suggested that, when one's willingness to speak up increased in the offline environment, one was also more likely to express opinions online. Similarly, researchers have found that people were less likely to express themselves online when perceiving their opinions to be on the minority side (Chang & Park, 2012; Yun & Park, 2011). Yet another study concluded that even journalists might not be willing to speak out if they discovered great discrepancies between their own views and the opinions of Twitter users (N. Lee & Kim, 2014).

Nonetheless, online and offline settings differ in various ways. For one thing, what is missing in the offline environment but present in the online world is notably the feature of visual anonymity and the availability of cues (Kiesler, Siegel, & McGuire, 1984). In the real world, the spoken language and tangible social cues, such as nonverbal gestures, were likely to influence an individual's willingness to express views (Ho & McLeod, 2008). For instance, the signs of nodding and smiles tended to encourage people to speak up, whereas frowning and shaking of the head were likely to be discouraging (Gabbott & Hogg, 2000). Although such cues are relatively limited in the online scenario, empirical research is inconclusive as to whether online interactions are affected. On the one hand, while individuals might not feel comfortable speaking in a face-to-face encounter due to stress or other social psychological factors, they reportedly talked more in the relatively relaxed online environment (Ho & McLeod, 2008; Straus, 1996). On the other hand, individuals are believed to communicate equally well, if not better, in traditional channels with their rich cues than through online media, which offer fewer cues (Walther, 1992). In particular, individuals can take time to manage the content of their speech and take advantage of available cues to facilitate discussion online (Walther, 1996). This evidence points to the significance of various communication channels that may moderate the effects of different factors on opinion expression.

Thus, in this study, we seek to apply the spiral of silence theory to the case of the Umbrella Movement in Hong Kong by examining and comparing individuals' willingness to speak up in both offline and online conditions. As noted, while the majority of Hong Kong residents appeared to support the issue of universal suffrage, others had reservations about the large-scale occupation of public space that created inconvenience and possible economic loss (e.g., F. Fung et al., 2014; C. Lau & Zhao, 2014). We thus ask the following research questions:

RQ1:   *How do college students in Hong Kong perceive the Umbrella Movement?*

RQ2:   *Are there differences between college students' willingness to speak up about the Umbrella Movement online and offline?*

Perceived Opinion Congruency

A central concept in the spiral of silence theory is the perceived climate of opinion. The perception of others' attitudes can be regarded as perceived support or normative pressure (Petrič & Pinter, 2002). It is assumed that individuals will be able to perceive the opinions of others accurately (Kennamer, 1990), even though some critics suggest otherwise (e.g., Nisbett & Wilson, 1977). Thus, it is important to note that it is an individual's perceived majority opinion, rather than the actual majority opinion, that determines that person's outspokenness (Taylor, 1982). Regardless of the accuracy of a person's perceptions about the general opinion climate, what matters is that individuals perceive their opinions to align with their own understanding of the majority opinion. In other words, the perceived opinion climate does not directly influence individuals' outspokenness; instead, it is the congruency of self-opinion with the perceived climate of opinion that predicts a person's willingness to speak up (Liu & Fahmy, 2011; Willnat, Lee, & Detenber, 2002). Similarly, Gearhart and Zhang (2014) conducted an online experiment and found that congruency with the general national opinion climate significantly affected people's online expressions. Therefore, in line with the theory, we can predict that perceived opinion congruency is likely to be a positive predictor of individuals' willingness to express views, both online and offline.

Nonetheless, scholars have also pointed to the fact that modern societies are often complex, layered, and patterned conglomerations of primary groups, reference groups, interest groups, and the like, rather than a homogeneous mass (Kennamer, 1990). Researchers have thus proposed to revise the original spiral of silence model to consider an individual's perceived opinion congruency with the reference group, rather than with the general public (Oshagan, 1996). A reference group, such as family members or peers, is a group that individuals use as a standard for evaluating their own behavior. While the opinion climate refers to the general public opinion in a society, a reference group's perceived opinions may well represent a microclimate. Comparing the perceived opinion congruency with the society as a whole with that involving only the reference group, scholars found that the reference group's perceived opinions played a more significant role in influencing the willingness to speak up (Hampton, Shin, & Lu, 2016; Katz, 1981; Moy, Domke, & Stamm, 2001; Oshagan, 1996). For example, Hampton and colleagues (2016) found that Facebook users were less likely to participate in conversations in the workplace, as there was an indirect effect such that Facebook use was related to perceived disagreement with coworkers, and that a sense of disagreement with coworkers hindered conversations. They also discovered that perceived opinion congruency on Twitter was positively associated with a willingness to speak out in the workplace.

Based on the above discussion, we thus propose an additional research question and two hypotheses:

RQ3:   How do college students perceive the opinion climate of the general public and of the reference group?

H1:   Those who perceive themselves as aligning with the majority opinion of the general public are more willing to speak up (a) online and (b) offline.

H2:   *Those who perceive themselves as aligning with the majority opinion of the reference group are more willing to speak up (a) online and (b) offline.*

Psychological Factors Affecting Outspokenness

Several psychological factors affect individuals' outspokenness. First, *fear of isolation* is well recognized as a strong negative predictor of outspokenness (Glynn & Park, 1997; Kim, Han, Shanahan, & Berdayes, 2004). When people feel that their opinions are not commonly shared, they may be reluctant to disclose their viewpoints publicly, assuming that individuals are vulnerable and afraid of being punished for failing to toe the line (Noelle-Neumann, 1993). As elucidated by Neuwirth, Frederick, and Mayo (2007), fear of isolation is defined as people's desire to avoid social sanctions that may result in being socially ostracized. The fear drives people to scan the surrounding environment for the majority's opinion, if the issues of the day are controversial. Indeed, this fear represents a motivation to avoid negative social sanctions and alleviate risks (Neuwirth & Frederick, 2004). Empirical findings have attested to the importance of the fear of isolation in influencing people's outspokenness (e.g., Hayes et al., 2001; N. Lee & Kim, 2014; Moy et al., 2001; Noelle-Neumann, 1974). The effect of that fear is believed to be attenuated in the online environment, however, due to anonymity and reduced pressure for social conformity (Ho & McLeod, 2008; N. Lee & Kim, 2014). Nonetheless, while users of certain social media are not entirely anonymous, researchers have demonstrated that users' willingness to speak up appears to be similar (Yun & Park, 2011). Hence, we propose:

H3:   *Fear of isolation negatively predicts college students' outspokenness (a) offline and (b) online.*

Another psychological factor that the present study aims to address is the awareness of negative consequence. In addition to the fear of isolation, the possibility of being punished in the future for controversial positions may negatively influence people's outspokenness. This feeling has close connections with fear of authorities. Previous studies have reported that some countries exercised much greater control over public speech than others, and the fear of authorities and an awareness of possible punishment may limit people's public discourse (Willnat et al., 2002). If individuals have a greater awareness of the consequences of speaking out, psychological constraints are likely to lead to self-censorship (Hayes, Scheufele, & Huge, 2006; Matthes et al., 2012). For example, ever since Edward Snowden revealed the improper use of controversial online surveillance programs in 2013, there has been widespread speculation about the potential consequences of government surveillance, leading to a chilling effect on speaking out about controversial political issues (Stoycheff, 2016). Especially in the context of Asia, power distance and the fear of authorities appear to exert a stronger influence on individuals' willingness to express opinions than in Western countries (Hofstede, Hofstede, & Minkov, 1997; Tweed & Lehman, 2002; Wright & Lander, 2003). Therefore, the awareness of consequences will remain a salient factor in online scenarios. We thus propose:

H4:   *Awareness of consequences negatively predicts college students' outspokenness (a) offline and (b) online.*

Moreover, media exposure has been found to bear a significant relation to the perceived majority opinion (Neuwirth & Frederick, 2004). In the past two decades, online media are found to provide alternative channels for information. Alternative media, a term created to distinguish these channels from the mainstream media (Atton, 2002), are often marked by diverse opinions and critical perspectives aimed at challenging existing powers and hierarchical social structures. In particular, alternative media have developed connections with social movements and political consciousness (Downing, 2003). Harlow and Harp (2012) found that online social networking sites were important organizing tools for online and offline protests in Colombia, Guatemala, and the United States. In the context of Hong Kong, Leung and Lee (2014) found that online alternative media exposure led to protest participation and support for unconventional actions. Hence, we predict that alternative media exposure would contribute to outspokenness during the movement:

H5:   *Exposure to alternative media positively predicts college students' outspokenness (a) offline and (b) online.*

Method

An online survey was conducted among local college students in Hong Kong between October and November 2014, when the Umbrella Movement was in progress. Three of the eight public universities in Hong Kong were randomly chosen, and two classes from each university were selected for participation. Course instructors were contacted and their approval was obtained to invite students in those classes to participate in the online survey in exchange for research credit on a voluntary basis. A total of 261 valid cases were received. The response rate was about 80%. The sample contains 69% females and 31% males. The average age of the respondent was 19 years.

Measurements

Outspokenness. As discussed earlier, we investigated outspokenness in both online and offline settings. In line with previous studies (e.g., Mutz 1989; Perry & Gonzenbach, 2000), outspokenness offline was measured by asking a two-part question, "How much are you willing (a) to be interviewed by reporters; and (b) to sign petitions?" The two items were correlated with each other moderately and we summed up the two to create a new variable indicating the level of offline outspokenness ($M = 3.12$, $SD = 0.97$; $r = .50$, $p < .001$). Outspokenness online was also measured by a two-part question, "How much are you willing (a) to speak out on social media; and (b) to debate online." These two items were also correlated and we averaged the two to create a new variable indicating the level of online outspokenness ($M = 3.02$, $SD = 1.01$; $r = .76$, $p < .001$). Respondents reported their level of outspokenness on a 5-point scale ranging from 1 (*being strongly unwilling to speak up*) to 5 (*being strongly willing to speak up*).

Perceived opinion climate and opinion congruency. Following Terry and Hogg (1996), the perceived opinion climate was measured by asking a two-part question, "To what extent do you perceive that (a) Hong Kong people in general regard the Umbrella Movement as a good thing, and (b) your peer group regards the Umbrella Movement as a good thing?" Respondents rated their perceptions on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Self-opinion was measured by the

question, "To what extent do you think the Umbrella Movement is a good thing?" Both offline and online opinion climates of peer groups were assessed, including the views from "most of the friends surrounding you," and those from "most of the friends on Facebook or other social media." During the analysis, the 5-point-scale opinion measurement was recoded to an ordinal scale: *in favor* (for 4 or 5 points), *neutral* (for 3 points), and *in disfavor* (for 1 or 2 points). Then, the item of opinion congruency was generated by comparing whether the respondents' attitudes are consistent with the perceived opinions from the general public and from their peer group, respectively. The opinion congruency was eventually operationalized as a dichotomous variable (1 = *being congruent*, 0 = *being incongruent*). For example, in terms of the attitude toward the movement, if a respondent rated 4 on the perceived public opinion climate (in favor) and rated 2 on self-opinion (in disfavor), the respondent would be coded as 0 in our measurement of opinion congruency, meaning being incongruent with the public. Measured as such, 54.79% of the respondents believed that their opinions aligned with the general public in Hong Kong, whereas up to 69.73% of the respondents considered that their opinions aligned with their peers.

Fear of isolation. A six-item measurement on the fear of isolation was adopted from Willnat and colleagues (2002). Some examples of the items read, "I worry about being isolated if people disagree with me," "I enjoy the process of making deliberation on some controversial issues" (reversely coded), and "I do not like to argue with the others" (reversely coded). Each item was measured with a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The six items were then added up to create a new variable indicating one's fear of isolation ($M = 2.62$, $SD = 0.68$, Cronbach's $\alpha = .70$).

Awareness of consequences. Awareness of consequences was assessed by how much the respondent agreed with the following statement: "There are certain things I do not post in my comments because I am worried about how they will be used in the future." The scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*), with an average of 2.60 (SD = 1.15).

Alternative media exposure. Alternative media exposure was assessed by the extent to which the respondents were exposed to alternative media online. Three popular alternative media in Hong Kong were included: *Hong Kong Independent Media* (inmediahk.net), *House News*, and *Passion Times*. Respondents reported whether they had used these alternative media (1 = *used*, 0 = *not used*). The three items were summed to create a new variable on the frequency of alternative media exposure ($M = 2.11$, $SD = 1.41$).

Control variables. Age, gender, political interest (measured by the level of interest toward the Umbrella Movement in Hong Kong; 1 = *not interested at all*, 5 = *very interested*), and political efficacy (measured by averaging the two items: "I believe I am competent to participate in political affairs," and "People like me can influence the government's decision making"; 1 = *totally disagree*, 5 = *agree very much*) were found to influence individuals' outspokenness (e.g., Lasorsa, 1991) and thus were included in the data analysis.

Results

Our first research question asks, "How do college students in Hong Kong perceive the Umbrella Movement?" As our findings showed, 68.34% of our respondents regarded the Umbrella Movement as a good thing, 21.62% held a neutral attitude, and 10.04% disagreed with the movement. The second research question asks, "Are there differences between college students' willingness to speak up about the Umbrella Movement, online and offline?" Results showed that people were slightly more willing to speak up offline (M = 3.12, SD = 0.97) than online (M = 3.02, SD = 1.01); however, an independent t-test indicated that there was no significant difference between offline and online outspokenness, $t(517)$ = −1.24. p = .107.

To address the third research question (i.e., "How do college students perceive the opinion climate of the general public and of the reference group?"), we found that respondents' perceptions about the opinion climate from the general Hong Kong public and their peer groups were much different (see Figure 1). While half of the college students in our sample (51.15%) believed that the general public was largely neutral about the movement, 41.54% of them believed that the general public supported it. Only as few as 7.31% of the respondents considered the general public to be against the movement. In contrast, as many as 80.31% of the respondents believed that their peer group held a positive attitude toward the movement. Only 15.44% of the respondents assumed that their peers were neutral on this issue, and even fewer (4.25%) respondents believed that their peers disagreed with the movement.
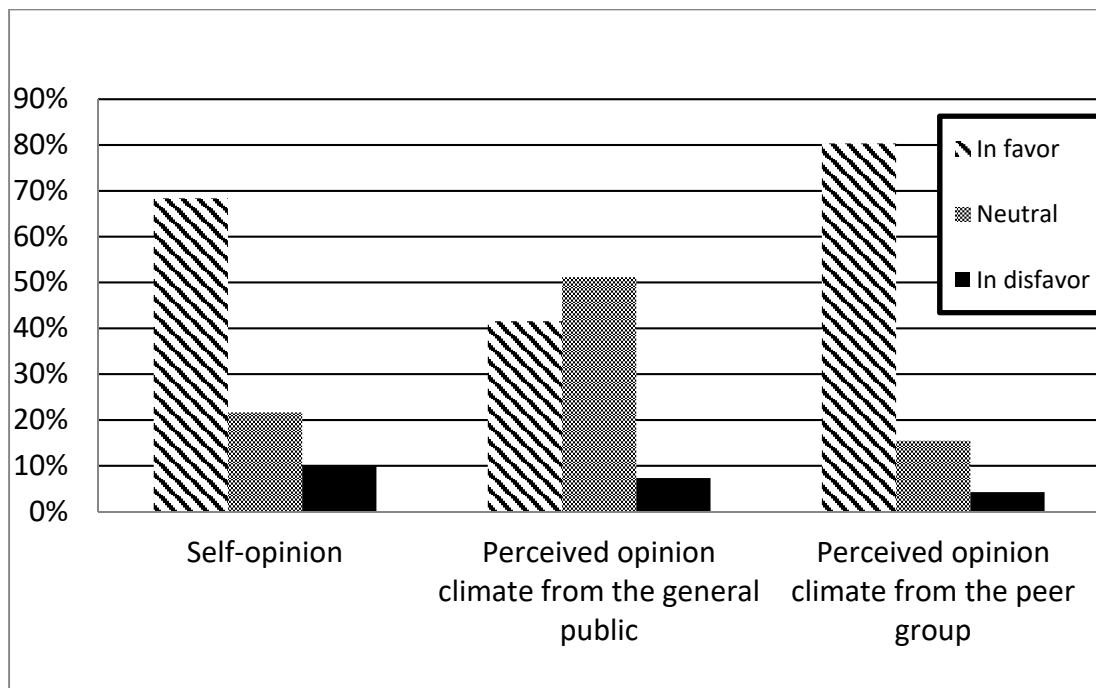

Figure 1. Opinions about the Umbrella Movement.

To test our hypotheses, we conducted four ordinary least squares (OLS) regression analyses to predict how two types of perceived opinion congruency (one's opinion against the perceived public opinion climate, and one's opinion against the perceived peers' opinion) as well as other factors might impact outspokenness, online and offline (see Table 1). Model 1 and Model 2 predicted offline outspokenness. Model 1 demonstrated how the perceived opinion congruency with the general public and other predictors influenced one's outspokenness in the offline condition, whereas Model 2 included the perceived opinion congruency with the peer group, together with other predictors. Model 3 and Model 4 examined how the perceived opinion congruency with the peer group and other factors predicted one's outspokenness in online conditions. In Model 3, we included the perceived opinion congruency with the general public and other psychological factors; in Model 4, we included the perceived opinion congruency with the peer group and other psychological factors.

Model 1 and Model 3 showed that the perceived congruency between the self-opinion and the perceived public opinion climate did not significantly predict college students' outspokenness, offline ($\beta = -.065$, $SE = .062$, ns) or online ($\beta = .046$, $SE = .11$, ns). Therefore, H1a and H1b were not supported. Alternatively, Model 2 and Model 4 revealed that the congruency between one's opinion and the perceived opinion from the peer group positively predicted college students' outspokenness offline ($\beta = .14$, $SE = .11$, $p < .05$), but not online ($\beta = .061$, $SE = .13$, ns). Hence, H2a was supported whereas H2b was not.

To examine the impact of fear of isolation on one's willingness to speak up in the offline condition, both Model 1 ($\beta = -.14$, $SE = .10$, $p < .05$) and Model 2 ($\beta = -.15$, $SE = .10$, $p < .01$) suggested that fear of isolation was negatively associated with college students' outspokenness. Hence, H3a was supported. However, Model 3 ($\beta = -.059$, $SE = .12$, ns) and Model 4 ($\beta = -.062$, $SE = .12$, ns) indicated that fear of isolation was not significantly associated with college students' outspokenness online. H3b was not supported.

H4 focused on the impact of awareness of consequences on one's outspokenness in both the offline and online conditions. Model 1 ($\beta = -.17$, $SE = .043$, $p < .01$) and Model 2 ($\beta = -.16$, $SE = .043$, $p < .01$) showed that awareness of consequences was negatively associated with college students' willingness to speak up in the offline setting. H4a was therefore supported. Meanwhile, Model 3 ($\beta = -.14$, $SE = .050$, $p < .01$) and Model 4 ($\beta = -.13$, $SE = .050$, $p < .05$) suggested that awareness of consequences was negatively associated with college students' willingness to speak out online. Hence, H4b was also supported.

Finally, the role of alternative media exposure was hypothesized to facilitate one's outspokenness in offline and online situations in H5. Model 1 ($\beta = .17$, $SE = .036$, $p < .001$) and Model 2 ($\beta = .16$, $SE = .035$, $p < .01$) showed that alternative media exposure was positively associated with college students' willingness to speak out offline. Meanwhile, alternative media exposure also positively predicted college students' willingness to speak out online in Model 3 ($\beta = .19$, $SE = .041$, $p < .001$) and Model 4 ($\beta = .18$, $SE = .042$, $p < .01$). Therefore, both H5a and H5b were supported.

Table 1. OLS Regression Results on Outspokenness Online and Offline.

	Offline Outspokenness		Online Outspokenness	
	Model 1	Model 2	Model 3	Model 4
Female	−.010	.0066	.021	.019
	(.10)	(.10)	(.12)	(.12)
Age	−.014	−.011	−.046	−.050
	(.019)	(.019)	(.023)	(.023)
Political interest	.32***	.28***	.29***	.27***
	(.068)	(.069)	(.079)	(.081)
Political efficacy	.19**	.14*	.16*	.15*
	(.062)	(.062)	(.072)	(.073)
Opinion congruence: self vs. the general public	−.065	—	.046	—
	(.096)		(.11)	
Opinion congruence: self vs. peers	—	.14**	—	.061
		(.11)		(.13)
Fear of isolation	−.14*	−.15*	−.059	−.062
	(.10)	(.10)	(.12)	(.12)
Aware of consequences	−.17**	−.16**	−.14*	−.13*
	(.043)	(.043)	(.050)	(.050)
Alternative media exposure	.17***	.16**	.19***	.18**
	(.036)	(.035)	(.041)	(.042)
Observations	252	252	253	253
Adjusted R^2	39.79%	41.09%	27.45%	27.55%
r^2	47.71%	42.97%	29.76%	29.85%
Model F Values	21.73***	22.88***	12.92***	12.98***

Note. Standardized OLS regression coefficients; standard errors in parentheses.
* $p < .05$, ** $p < .01$, *** $p < .001$.

Discussion

This study applied the spiral of silence theory to the pro-democracy Umbrella Movement in Hong Kong. Our findings largely confirmed the theory, in a nuanced manner, by including perceived opinions from the reference group and extending the model to an online setting. Our contributions are threefold. First, this study attested to the importance of peer groups in individuals' decision-making processes. Our findings showed that, while college students believed that the overall opinion climate about a social movement might be divided, they stood hand in hand with their peers, who were considered strongly supportive of the movement. Only those who perceived themselves as aligning with the majority opinion

of their peer group, rather than with the general public, were more willing to speak up offline. This result confirms that the perceived dominance of an opinion is more important in a particular part of the population than among the general public (Glynn & Park, 1997; Krassa, 1988). Meanwhile, the reference group serves to deliver rewards and punishments for conformity and nonconformity most directly and effectively, and hence college students may refer to their peers for personal judgment (Oshagan, 1996).

Second, our study provides empirical evidence of the spiral of silence effect in the Web 2.0 context. Although several scholars have attempted to test the spiral in the online environment, results of those empirical studies are mixed (e.g., Hampton et al., 2014; Ho & McLeod, 2008). We join those scholars who have hoped that social media may provide different discussion venues for those with minority views to express their opinions freely. College students in our study were found to be more likely to voice their opinions online than in offline settings, in line with the results in previous studies (Ho & McLeod, 2008; Esarey & Qiang, 2008). In fact, we did not find any significant difference between opinion congruency and outspokenness in the online setting, so an individual's willingness to speak out online appears to have little to do with their perceptions of others' opinions. This can be partly attributed to the fact that the virtual community ensures significantly greater anonymity, with reduced social cues and feelings of threat that may make people feel less constrained in expressing different or minority viewpoints (Ho & McLeod, 2008). It has been argued that an individual's selective exposure to online information may generate the perception of a consonant climate of opinions, which may reduce people's fear of isolation (Schulz & Roessler, 2012). In the age of social media, however, with identifiable elements online, the negative association in our findings between awareness of consequences and outspokenness in an individual suggests that, even if college students fear little in the cyberspace, they may still censor themselves if they become aware of any consequence of speaking up, whether online or offline (Hayes et al., 2006; Matthes et al., 2012).

Third, in the spiral of silence theory, mass media are believed to help shape the opinion climate, affecting individuals' outspokenness. However, in a media-saturated society such as Hong Kong, the role of the mass media can be dubious, as the political stances of media organizations are varied or even polarized (A. Fung, 2007), rendering an overall media exposure measure ambiguous. Hence, in this study, we decided to highlight alternative media, and the results generally confirm their role in facilitating college students to speak up. There was a strong positive association between alternative media exposure and outspokenness, both online and offline. This finding echoes a number of studies demonstrating the important role of alternative media, particularly social media, in the mobilization and organization of large-scale protests in both democratic and authoritarian societies. For example, Lim (2012) examined the political changes in Egypt in view of the 2011 uprising there. He found that online alternative media and online activism contributed to most of the influential social movements in Egypt. Social media in particular, as an alternative communication channel in the authoritarian state, provided opposition parties and leaders with an effective platform for defining the issue and framing their message in the mobilization process (Lim, 2012).

In conclusion, this study empirically tested the spiral of silence and was able to discover salient effects due to the divisive nature of the pro-democracy issue and the survey's timing. Timing can be a particularly important factor for testing such an effect, as the perceived dominant climates of opinions

often vary over time (Scheufele, 2000). There are a few issues that deserve further investigation, however. First, in a media-saturated environment, it may be increasingly difficult for one to identify a dominant opinion climate. In the presence of diverse opinions both online and offline and people's selective exposure to content, individuals may tend to overestimate how their views accord with those of the majority (Horrigan, Garrett, & Resnick, 2004). The pressure to conform to the mainstream opinion may become less imperative over time. Second, our findings point to the relatively weak explanatory power of the spiral of silence in understanding an individual's outspokenness in the online setting, in contrast with other studies (e.g., Hampton et al., 2014), which tested and confirmed the spiral of silence effect in the online scenario. The difference in findings may be attributed to the selection of topics and the ways in which outspokenness was operationalized. Future research should address the methodological discrepancies and investigate the attributes and relevance of the issues to advance the theory. Third, although our study forgoes a traditional, linear measure of mass media in shaping public opinion, focusing instead on the impact of alternative media on an individual's outspokenness, scholars may wish to consider looking into the role of mass media in a more nuanced way, both qualitatively and quantitatively. Last, as with all other cross-sectional surveys, our study relied on respondents' self-reports at one shot. Even though we were able to record timely responses when the movement was in progress, the results by no means captured all levels of outspokenness. A longitudinal panel study would be helpful in providing insights in this regard.

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