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A Click Is Worth a Thousand Words: Probing the Predictors of Using Click Speech for Online Opinion Expression

TAI-YEE WU
National Chiao Tung University, Taiwan

ANNE OELDORF-HIRSCH
DAVID ATKIN
University of Connecticut, USA

This study investigates user willingness to use various types of click speech—commenting, giving a thumbs-up and/or thumbs-down, and sharing—for online opinion expression. Drawing from spiral of silence theory, results (N = 339) indicate that state-based fear of isolation is generally a negative predictor of opinion expression. Moreover, an unfavorable opinion climate reduces one's willingness to comment and give other commenters a thumbs-up, but remarkably encourages the tendency to give a thumbs-down. Support from family also fosters the use of a thumbs-down button. In addition, perceived online anonymity facilitates commenting, and perceived congruity with the reported opinion in news and issue involvement motivate news sharing. The diverse types of click speech thus demonstrate that opinion expression in cyberspace ranges from the more explicit verbal commenting to the more implicit endorsement and disapproval, expanding the applicability of spiral of silence theory and its related concepts to modern online communication.

Keywords: click speech, online news comments, spiral of silence, paralinguistic digital affordances, news sharing, opinion expression

Click speech refers to an emerging form of online communication with the rise of Web 2.0 that enables users to present quick opinions or react to others' posts through such platform features as the "comment," "like," and "share" buttons (Chua & Banerjee, 2017; Pang et al., 2016). Whereas commenting resembles the more traditional way of text-based opinion expression (e.g., Thurman, 2008), liking or using a thumbs-up button highlights the capacity of click speech to engage individuals in "lightweight expression" without using verbal messages. Such "paralinguistic digital affordances" (PDAs) signal one's subtle affirmation and support of other social media contacts (R. A. Hayes, Carr, & Wohn, 2016). Sharing also suggests opinion dissemination, which particularly occurs in the context of news sharing, as opinion leaders share online news articles to exert their

Tai-Yee Wu: taiyeewu@g2.nctu.edu.tw
Anne Oeldorf-Hirsch: anne.oeldorf-hirsch@uconn.edu
David Atkin: david.atkin@uconn.edu
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individual influence (e.g., Oeldorf-Hirsch & Sundar, 2015). Click speech thus promotes diverse modes of opinion expression and various degrees of opinion explicitness for online users in their discussions about public issues.

Research investigating online opinion expression from the approach of click speech remains preliminary, however. Spiral of silence (SoS) studies still commonly examine users' willingness to post verbal messages on online social venues, including discussion forums (e.g., Nekmat & Gonzenbach, 2013), news comment sections (e.g., Soffer & Gordoni, 2018), and social media (e.g., Chan, 2018). Such research generally replicates the theory's principles that, driven by the fear of social isolation, those who hold an opinion deviant from the majority are less willing to articulate it in public (Noelle-Neumann, 1993). Yet, such efforts contribute little to our understanding of how the online SoS phenomenon may have been reshaped by the more implicit and paralinguistic folkways of click speech. Moreover, extant findings on click speech (e.g., Pang et al., 2016) may be updated as PDA features have expanded, not only to symbolize one's endorsement, but also disapproval (e.g., a thumbs-down button; Rains, Kenski, Coe, & Harwood, 2017).

This study thus aims to probe recent dynamics of click speech that underpin online opinion expression, and applies online news comment sections as the focal setting. Such venues represent a major forum for contemporary online discussion and public sphere conversations that SoS theory originally investigated (Wu & Atkin, 2018). More important, online news comment sections generally encompass the features of commenting, PDAs (both thumbs-up and thumbs-down buttons), and sharing, which help enhance the external validity of such inquiries.

As SoS theory has evolved to diagnose both the factors that encourage and discourage opinion expression, the framework helps offer comprehensive insights in the examination of willingness to use click speech. Specifically, an unfavorable opinion climate and the fear of isolation serve as two negative predictors of such activity (Noelle-Neumann, 1993). By contrast, opinion congruity with news reports (Lin & Salwen, 1997), perceived support from one's reference group (e.g., Glynn & Park, 1997), online anonymity (e.g., Wu & Atkin, 2018), and issue involvement (e.g., Salmon & Neuwirth, 1990) are considered positive indicators. Study results are thus expected to enrich the understanding of online opinion expression by comparing willingness to disclose viewpoints across different types of click speech.

Click Speech and Online Opinion Expression

Click speech can be more specifically characterized as using the PDAs and the share button for symbolic speech in contrast to the actual verbal statements (Sklan, 2013). Yet, a broader definition that also includes comment posting as a more active communication form has also found support in the literature (e.g., Chua & Banerjee, 2017; Pang et al., 2016). This study follows the latter perspective to investigate click speech used for opinion expression. In the online news landscape, engagement with news content can range from explicitly commenting on existing content, to broader PDAs such as liking or voting on such content, to resharing news stories with one's social network. Internet and social media users actively engage with online news content. The more they both seek and stumble on news on sites such as Facebook, the greater their rate of engagement with that content through actions such as commenting on those posts (Oeldorf-Hirsch, 2018). The users also adopted the features of commenting, using PDAs, and sharing cyclically as a cohesive form of online news engagement,

suggesting that both verbal and symbolic modes of click speech are crucial indicators of online opinion expression.

Commenting on and discussing politics online is a very common form of online expression, and one that predicts key outcomes such as greater political interest (Holt, Shehata, Strömbäck, & Ljungberg, 2013) and involvement (Kushin & Yamamoto, 2010), as well as civic participation (Chan, 2018; Thurman, 2008). Even PDAs carry many meanings for their users and their receivers. Social media users "like" a post made by another user online when they find the content favorable, to provide support, and to keep track of desired contents. The meaning of these PDAs is understood by their receivers as involving emotional, social, and status approval (R. A. Hayes et al., 2016).

Moreover, increasing varieties of the PDAs have been available across different social media platforms, and they do not all symbolize positive reactions. For instance, disapproval is commonly represented by a thumbs-down button feature as a tool of rating in online news comment sections (e.g., Rains et al., 2017). Similarly, among the five additional emotive reaction icons—"love," "haha," "wow," "sad," and "angry"—launched by Facebook in 2016, the corresponding faces of sadness and anger facilitate the users in signaling their negative emotions toward online news stories and posts from politicians (Hughes & van Kessel, 2018). These newer PDAs substantially expand the usability of click speech for less explicit opinion expression, and the influences on such use require more empirical investigation.

Finally, individuals are motivated to reshare news on social media via the need to seek information, socialize, and seek status from their networks (Lee & Ma, 2012; Wang, Hmielowski, Hutchens, & Beam, 2017). Sharing news with one's online social network has important psychological benefits in terms of issue involvement, interest, and being informed (Oeldorf-Hirsch & Sundar, 2015). On Facebook, political expression is commonly enacted by reposting others' posts, which has real-world impacts on donating to social and political causes (Martin, 2013). In addition, news information shared by a social media friend was found to increase the viewer's perceived level of media trust as well as his/her intention to seek more information from that outlet (Turcotte, York, Irving, Scholl, & Pingree, 2015). Such effects were even amplified when the "sharer" was regarded as an opinion leader in the viewer's social network. This finding exemplifies the symbolic meaning of social recommendation that a click of sharing conveys, which also implies the sharer's endorsement of that content.

On balance, endorsement and disapproval appear to be common themes of click speech across commenting, using PDAs, and sharing. This theme also applies to a variety of communication contexts such as news discussions (e.g., Wu & Atkin, 2018) and consumer reviews (e.g., Ziegele & Weber, 2015), indicating that it is valid to examine click speech as a form of online opinion expression. Focusing on news comment sections online, this study further employs SoS concepts as a theoretical framework to understand the determinants of such thematic uses of click speech.

Online SoS and Opinion Expression Suppressors

SoS theory assumes that individuals are capable of estimating the opinion climate—the relative strength of different viewpoints—of a public issue in society. Therefore, when individuals sense that their

opinions deviate from the majority, they tend to silence themselves in public conversations (Noelle-Neumann, 1993). This process highlights two determinants that reduce willingness to express oneself: (1) an unfavorable opinion climate that illustrates the more objective situation in which individuals perceive that their opinions deviate from the dominant opinion climate (e.g., Scheufele, Shanahan, & Lee, 2001) and (2) the fear of isolation from the majority. Contemporary SoS studies seldom consider the relationship between these two determinants, but more likely treat each as an independent predictor (e.g., Chan, 2018). Recent findings further support these separate influences, as fear of isolation was not found to intervene in the prediction of unfavorable opinion climate on opinion expression tendency (Wu & Atkin, 2018). Therefore, the following discussion focuses on the individual impacts of these two determinants.

Unfavorable Opinion Climate

Empirical studies have substantiated that an unfavorable opinion climate negatively affects willingness to express (e.g., Nekmat & Gonzenbach, 2013). However, research examining the impacts of opinion climate on the use of click speech remains preliminary. For instance, Pang et al. (2016) identified that those effects on one's willingness to comment, like, and share were negligible. Yet, the researchers reflected that the experiment stimulus—a simulated Facebook page—might remind the respondents of an obtrusive difference from their own pages and distract them from potentially immersing into the experimental conditions. In contrast to the social context of Facebook, in which the opinions are mainly posted by the contacts they already know, the commenters in online news comment sections are generally strangers to the viewers (Wu & Atkin, 2017). Adopting online news comment sections as the focal setting, therefore, may help reduce the confounding issue of perceived stimulus realism.

Based on the theory and research reviewed above, we assumed that opinion climates in online news discussions would influence one's posting behaviors. To recap, the literature indicates an inverse relationship between unfavorable opinion climate and willingness to express one's deviating view, reflecting the relative unlikelihood for individuals to endorse the opinions with which they disagree. Based on the assumption that individuals are hesitant to express minority opinions on social networking sites (SNSs), we hypothesized that unfavorable opinion climates would inhibit expression in many forms. In particular,

H1: An unfavorable opinion climate in online news discussions negatively predicts one's willingness to (a) post comments, (b) give a thumbs-up to other commenters, (c) give a thumbs-down to other commenters, and (d) share news reports from online news discussions to their SNSs.

Fear of Isolation

Noelle-Neumann (1993) argues that public opinion exerts a means of social control that threatens people who hold a deviant view. Therefore, opinion withdrawal is likely to be their reaction in public to avoid the negative social sanction of alienation. Although we have an understanding of the influence of fear of isolation on one's verbal expression tendency (both spoken words and text-based messages), this influence on other types of click speech remains unclear. For instance, Pang et al. (2016) substantiated the negative prediction of fear of isolation only on commenting, but not on liking or sharing a Facebook post, nor on liking the comments responding to that post. They attributed the results not only to the limited external validity of their experimental

stimuli, but also the potential confounding effect of sharing that takes Facebook users extra steps to complete (e.g., select the receiver).

With regard to the fear of isolation measure itself, moreover, Pang et al. (2016) followed the trait-like approach, which considers this psychological determinant as an individual's disposition across situations (e.g., Soffer, & Gordoni, 2018). Yet, as communication contexts become more diverse, the state-based approach that specifically measures the fear one experiences in the given context may provide more accurate results. Wu and Atkin (2018) compared these two approaches to the fear of isolation in their study of individuals' online news comment posting behavior; only the state-based fear was found to be predictive. Thus, the state-based approach may also be helpful to verify the impact of one's fear of isolation on the specific usage of click speech.

Because theoretical work has repeatedly verified the negative influence of fear of isolation on one's willingness to express—regardless of online or offline contexts—this psychological indicator does not seem to vary by the modalities of communication used for revealing dissenting voices or disapproval. Based on the assumption that fear of isolation would inhibit expression, we posited that unfavorable opinion climates would inhibit SNS expression. More formally,

H2: State-based fear of isolation in online news discussions negatively predicts one's willingness to (a) post comments, (b) give a thumbs-up to other commenters, (c) give a thumbs-down to other commenters, and (d) share news reports from online news discussions to their SNSs.

Online SoS and Opinion Expression Facilitators

Reference Group Support

In addition to Noelle-Neumann's (1993) original emphasis on media effects on SoS, non-mediated human interactions may also influence one's opinion expression tendency. For instance, studies have shown that opinion congruity with one's social circle, such as reference groups (e.g., Moy, Domke, & Stamm, 2001), positively predicts willingness to express opinions in public.

Given that individuals are likely to gain affirmation from their reference group when their opinions on a given issue correspond, the perceived opinion congruity with one's reference group results in a sense of social support, which is characterized as the interpersonal transactions with positive emotions, affirmative articulations, and/or helping behaviors offered in one's social networks (Kahn & Antonucci, 1980). Such perceived reference group support has emerged, also, as a predictor of one's willingness to express his/her view in public across various non-mediated communication contexts (e.g., Dalisay, Hmielowski, Kushin, & Yamamoto, 2012). In online news comment sections, given that click speech enables the users to express their opinions by posting explicit comments as well as showing more implicit endorsement/disapproval toward other commenters' posts, whether the influence of reference group support also extends to click speech is intriguing. Based on the above theory and research, therefore, we hypothesized:

H3: *Reference group support positively predicts one's willingness to (a) post comments, (b) give a thumbs-up to other commenters, (c) give a thumbs-down to other commenters in online news discussions, and (d) share news reports from online news discussions to their SNSs.*

Issue Involvement

Involvement is defined as "a person's perceived relevance of the object based on inherent needs, values, and interests" (Zaichkowsky, 1985, p. 342). Different SoS studies measured issue involvement with different labels and aspects, such as "personal concern" (Salmon & Neuwirth, 1990) and "perceived issue salience" (e.g., Ho, Chen, & Sim, 2013). Regardless of these terminological differences, however, the results generally indicated that involvement with a given issue predicts willingness to express in public. Thus, the more that people are involved in a topic (e.g., showing more interest in it), the more they are willing to be engaged in the conversation on this topic and express their views online. To replicate the above findings in the context of online opinion expression using click speech, we posited that:

H4: *Issue involvement in online news discussions positively predicts one's willingness to (a) post comments, (b) give a thumbs-up to other commenters, (c) give a thumbs-down to other commenters, and (d) share news reports to their SNSs.*

Perceived Congruity With the Reported Opinion in Online News

Newsworthiness refers to the qualities of incidents that motivate news media's coverage (Galtung & Ruge, 1965). In online news discussions, qualities such as proximity, frequency, and impact of a news article have predicted the number of comments posted (Weber, 2014), indicating that newsworthiness also promotes reader participation. The reports of poll results about a controversial issue may reflect some extent of newsworthiness, as the information demonstrates distribution of the opinion climate to audiences. Based on Noelle-Neumann's (1993) argument, mass media—particularly news media—are important vehicles for capturing the opinion climate on an issue and therefore shape the SoS that one experiences. The perceived value of the reported poll results is likely to be enhanced, particularly for those holding an opinion congruent with the report. They may be more willing to express their opinion regarding the report (and poll) in the comment section as well. Moreover, as a news story recommended by social media friends has been found to promote the receiver's trust in that news outlet (Turcotte et al., 2015), this type of click speech is likely to symbolize endorsements from the sharer, in particular. On the other hand, giving a thumbs-up or a thumbs-down is mainly associated with other commenters in this study; uses of such click speech may be less relevant to the online news itself. Thus, we proposed:

H5: *Perceived congruity with the reported opinion in online news positively predicts one's willingness to (a) post comments and (b) share the news report to their SNSs.*

Online Anonymity

As a significant technological attribute in computer-mediated communication, online anonymity has received growing research attention to its effects on the SoS phenomenon. For instance, Ho and McLeod (2008)

verified a less negative impact of fear of isolation on individuals' willingness to express for those in the anonymous computer-mediated communication condition than those in the face-to-face context. Similarly, Yun and Park's (2011) study of online forums indicated that online anonymity insolates users from the fear of isolation. As the conceptualization of online anonymity evolves to identify more aspects of this attribute—such as the more objective, technical anonymity and subjective, perceived anonymity dimensions (e.g., Christopherson, 2007)—research has revealed more complex results. That is, Wu and Atkin (2018) failed to replicate the relationship between online anonymity and one's fear of isolation in online news comment posting, but their findings demonstrated that one's perceived online anonymity directly predicts his/her willingness to express. The influences of technical online anonymity, on the other hand, were limited.

Regardless of the inconsistent results concerning the relationship strength between online anonymity and fear of isolation, the above findings generally verify that online anonymity itself encourages overall opinion articulation in cyberspace. By the same token, higher anonymity contexts should also be more preferable for one to signal less explicit endorsement (i.e., a thumbs-up or sharing) as well as disapproval (i.e., a thumbs-down) of others' views. To incorporate evidence supporting the theory that perceived online anonymity exerts a greater impact than technical anonymity on opinion expression tendency (e.g., Wu & Atkin, 2018), we posited that:

H6: Technical anonymity positively predicts perceived online anonymity in online news discussions, which in turn positively predicts one's willingness to (a) post comments, (b) give a thumbs-up to other commenters, (c) give a thumbs-down to other commenters, and (d) share the news report to their SNSs.

Method

We conducted an online experiment using simulated images of an online news section as stimuli, which were embedded in the online questionnaire platform Qualtrics.com. Data for this study were collected as part of a larger research project, of which the other findings are demonstrated in Wu and Atkin (2018). Volunteer participants were recruited in a large introductory-level course meeting a general education requirement across different majors from a northeastern U.S. university. The students received research credit for their participation. The sample (N = 339) was 54.9% female and 45.1% male. A dominant proportion of the respondents (73.7%) were Caucasian, followed by Asian Americans (6.2%), African Americans (6.2%), Hispanics (5.3%), and other or mixed heritages (8.5%).

Public Issue: Abortion

The focal issue selected for this study was abortion, which has drawn scholarly attention in previous SoS literature (e.g., Salmon & Neuwirth, 1990). Over the most recent decade (2009–2019), the poll findings from Gallup.com (2019) demonstrate relatively stable, equal percentages of supporters for the "pro-life" (44–51%) and the "pro-choice" (41–50%) sides. This historical trend illustrates that abortion remains controversial in the United States, indicating an appropriate issue for SoS research.

Experimental Design and Procedure

The experimental setting of online news comments involved three degrees of online anonymity (high, medium, and low) and two types of opinion climate (unfavorable and favorable). The high-anonymity comment section indicates that the participants could use any username or remain anonymous with their post; the medium-anonymity section asked the participants to sign in one of their major SNS accounts before making a post, but the username appearing in that post could be something else; the low-anonymity section required the participants to sign into an SNS, with their username revealed on their post. In addition, each participant saw three existing comments, of which the valence—either three "pro-choice" or three "pro-life" posts—was also manipulated. The stimuli can be found in the supplemental material of Wu and Atkin (2018).

In the data analysis, the participants were then re-classified as being in a favorable or unfavorable opinion climate according to their attitude toward abortion (i.e., whether they think abortion in all or most circumstances should be illegal, legal, or were neutral). That is, the participants were assigned to the conditions in which their attitude toward abortion went against the commenters (i.e., whether abortion should be illegal, yet were assigned to the "pro-choice" conditions). These responses were coded as occupying an unfavorable opinion climate. On the contrary, the participants whose assigned condition aligned with their attitude toward abortion (e.g., those who thought abortion should be illegal and were assigned to the "pro-life" conditions) were coded as occupying a favorable climate. Those who indicated a "neutral" attitude were eliminated from the data.[1]

The experiment began by asking the respondents to answer a set of demographic questions, followed by the items measuring their trait-like fear of isolation, moral values, issue involvement regarding abortion, attitude toward abortion, and perceived reference group support. Afterward, the respondents were instructed to read a simulated online news article about the recent poll findings regarding abortion. Then, they were randomly assigned to one of the six online news comment conditions. After being exposed to the stimuli, the participants completed manipulation checks as well as measures of perceived opinion congruity with the media report and state-based fear of isolation. Finally, they indicated their willingness to express by posting comments, giving a thumbs-up to other commenters, giving a thumbs-down to other commenters, and sharing the news report.

[1] In the questionnaire, the participants were asked, "What is your general attitude toward abortion?" with the following options adopted from Gallup.com (2015): "illegal in all circumstances," "illegal in most circumstances," "neutral," "legal in most circumstances," and "legal in all circumstances." In the analysis, participants who indicated illegal in all and most circumstances were combined and reclassified as illegal (-1), whereas those who checked legal in all and most circumstances were recoded as legal (1). However, those who responded as neutral (0) were not included in the data (15.5%) to ensure that the participants in the sample encountered either a favorable or unfavorable opinion climate in the experiment.

Measures

Predictors

State-based fear of isolation was measured with four items (e.g., "In this online news discussion, I avoid telling other people what I think when there's a risk they'll avoid me if they knew my opinion"; M = 4.00, SD = 1.14; Cronbach's α = .72) adapted from Ho and McLeod (2008) and Scheufele and colleagues (2001), followed by a 7-point Likert scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The respondents' reference group support was asked using two questions: support from family ("To what extent do you think your family would support your opinion on the issue of abortion?"; M = 4.85, SD = 1.69) and support from friends ("To what extent do you think your friends would support your opinion on the issue of abortion?"; M = 5.04, SD = 1.24). The items were followed by a 7-point Likert format, ranging from 1 (*none*) to 7 (*all*). The participants' involvement in the issue of abortion was measured with nine items (e.g., "This issue is significant to me"; M = 4.51, SD = 1.17; Cronbach's α = .91) adapted from previous studies (e.g., Zaichkowsky, 1985). This measure was followed by a 7-point Likert format, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Perceived congruity with the reported opinion in news was measured with a single question ("To what extent do you think your opinion is congruent with the poll results reported in this news article?"; M = 4.52, SD = 1.19) adapted from previous studies (Glynn & Park, 1997; Moy et al., 2001). This item was measured on a 7-point Likert format, ranging from 1 (*none*) to 7 (*all*). Based on the literature (Christopherson, 2007; Rössler & Schulz, 2014), perceived online anonymity was measured with three items (e.g., "If you would like to post your comment, to what extent do you think you are anonymous?"; M = 3.29, SD = 1.57; Cronbach's α = .90), followed by a 7-point semantic differential scale, ranging from 1 (*totally identifiable*) to 7 (*totally anonymous*).

Dependent Variables

Each dependent variable was measured with a single item on a 7-point Likert format, ranging from 1 (*very unwillingly*) to 7 (*very willingly*). Willingness to post comments: "How willingly would you post your opinion on this comment section?" (M = 2.84, SD = 1.67); willingness to give a thumbs-up: "How willingly would you give thumbs-up to the comment you just saw?" (M = 3.48, SD = 1.95); willingness to give a thumbs-down: "How willingly would you give a thumbs-down to the comments you just saw?" (M = 3.67, SD = 1.88); and willingness to share the news report: "How willingly would you share this news article on one of your social networking sites?" (M = 2.88, SD = 1.48).

A confirmatory factor analysis incorporating the predictors and outcome variables into the measurement model was conducted. The results indicated a relatively good model fit that met the cutoff criteria suggested by the literature (i.e., Hu & Bentler, 1999; Marsh & Hocevar, 1985): $\chi^2(182) = 341.05$, $\chi^2/df = 1.87$, $p < .001$; comparative fit index = .953; root mean squared error of approximation = .051. In addition, each measure's composite reliability, average variance extracted, maximum shared variance, and the square root of average variance extracted were calculated for convergent and discriminant validity tests. For the single-item measures, the estimated variance was adjusted applying Jöreskog and Sörbom's (1982) formula with the reliability alpha value set at .85. The results (see Table 1) also demonstrated that the measures were adequately to highly reliable and valid based on the criteria recommended by Fornell and Larcker (1981) and Hair, Black, Babin, Anderson, and Tatham (2006).

Table 1. Results of Validity Tests and Intercorrelation Between Measures (N = 339).

Measure	CR	AVE	MSV	1	2	3	4	5	6	7	8	9	10
1. State-based fear of isolation	.76	.46	.14	**.68**									
2. Reference group support (family)[a]	.85	.55	.10	−.03	**.92**								
3. Reference group support (friends)[a]	.85	.85	.15	−.07	.27***	**.92**							
4. Issue involvement	.91	.55	.08	−.12*	.15**	.11*	**.74**						
5. Perceived congruity with news reported opinion[a]	.85	.85	.15	.02	.12*	.33***	.15**	**.92**					
6. Perceived online anonymity[a]	.91	.76	.02	.08	−.06	−.04	−.04	.03	**.87**				
7. Willingness to comment[a]	.85	.85	.16	−.33***	.02	.08	.21***	.00	.13**	**.92**			
8. Willingness to give a thumbs-up[a]	.85	.85	.52	−.04	−.03	−.00	.06	−.04	.13*	.25***	**.92**		
9. Willingness to give a thumbs-down[a]	.85	.85	.52	−.09	.13**	.06	.06	−.00	−.01	−.05	−.61***	**.92**	
10. Willingness to share the news[a]	.85	.85	.15	−.20***	.03	.17***	.25***	.17**	−.02	.34***	.12*	−.01	**.92**

Note. CR = composite reliability; AVE = average variance extracted; MSV = maximum shared variance. The fifth to 14th columns from left demonstrate the intercorrelations of the 10 measures with the diagonal values in bold numbers indicating each measure's square root of AVE.
[a] Single-item measure: The CR, AVE, MSV, and the square root of AVE are estimated based on Jöreskog and Sörbom's (1982) adjustment formula for the estimation of error variance with the level of reliability set at α = .85.
*p < .05. **p < .01. ***p < .001.

Control Variables

This study also measured the participants' sex (male = 1, female = 0), ethnicity (Caucasian = 1, others = 0), religious affiliation (religious = 1, nonreligious = 0), moral values (the short version of Ethical Values Assessment developed by Padilla-Walker & Jensen, 2015; e.g., "I should aim to live a holy life"; 7-point Likert scale from *strongly disagree* to *strongly agree*; $M = 5.57$, $SD = 0.77$; Cronbach's $\alpha = .88$), and trait-like fear of isolation (adopted from Ho & McLeod, 2008; Scheufele et al., 2001; e.g., "I avoid telling other people what I think when there's a risk they'll avoid me if they knew my opinion"; 7-point Likert scale from *strongly disagree* to *strongly agree*; $M = 4.16$, $SD = 1.08$; Cronbach's $\alpha = .74$) as control variables.

Manipulation Checks

To check the manipulation of online anonymity, we used the measure of perceived online anonymity. The analysis of variance showed significant differences among the three degrees of anonymity (high: $M = 4.54$, $SD = 1.28$; medium: $M = 2.94$, $SD = 1.22$; low: $M = 2.36$, $SD = 1.27$): $F(2, 336) = 94.72$, $p < .001$, $\eta^2 = .36$. Post hoc tests using the Scheffé approach also indicated significant differences between each condition of anonymity.

For the valence of comments, the participants were asked the following two questions measured on a yes–no format: (1) "Overall, these three online news comments share a similar viewpoint on abortion" and (2) "Overall, these three comments support abortion rights." Chi-square tests indicated that both questions were correctly answered with statistical significance: Question 1, $\chi^2(1) = 158.68$, $p < .001$; Question 2, $\chi^2(1) = 302.93$, $p < .001$. Those who provided the wrong answer to either of these two questions were not included in the sample. Based on the above results, the manipulations designed for the current study were effective.

Results

A chi-square test was first conducted to examine the sample distribution of each condition, including high anonymity/favorable climate ($n = 65$, 19.2%), high anonymity/unfavorable climate ($n = 53$; 15.6%), medium anonymity/favorable climate ($n = 50$, 14.7%), medium anonymity/unfavorable climate ($n = 49$, 14.5%), low anonymity/favorable climate ($n = 58$, 17.1%), and low anonymity/unfavorable climate ($n = 64$, 18.9%). The results indicate that the six conditions were equally distributed, with no significant difference: $\chi^2(2) = 1.38$, $p = .501$. Next, collinearity diagnostics were employed to test the potential collinearity among the predictors and dependent variables. The results showed that all of the valence inflation factor values for the variables were less than 1.59, indicating that multicollinearity was not present.

To test the research hypotheses, we analyzed four hierarchical multiple regression models examining the predictive effects on willingness to post comments, give a thumbs-up, give a thumbs-down, and share the news report. The control variables—including sex, ethnicity, religious affiliation, moral values, and trait-like fear of isolation—were entered in the first block. The manipulated variables

were entered in Block 2: technical online anonymity "high versus low" (further dummy coded as high = 1 and low = 0), technical online anonymity "medium versus low" (medium = 1 and low = 0), and opinion climate (unfavorable = 1 and favorable = 0). The remaining predictors—state-based fear of isolation, perceived congruity with the reported opinion in news, reference group support from family and friends, perceived online anonymity, and issue involvement—were entered in Block 3 (see Table 2).

Hypothesis 1 predicted a negative effect of unfavorable opinion climate on one's willingness to use different types of click speech in online news discussions. The results across the models demonstrated significant negative predictions on commenting (the standardized coefficient β = −.17, p = .002), giving a thumbs-up to other commenters (β = −.72, p < .001), and sharing the news report with fellow SNS users (β = −.11, p = .044). Yet, although the prediction on giving a thumbs-down to the commenters was also significant, it indicated a positive effect (β = .59, p < .001). Therefore, Hypotheses 1(a), (b), and (d) were supported, but Hypothesis 1(c) was not.

Table 2. Results of Multiple Regression Analyses (N = 339).

	Commenting		Thumbs-up		Thumbs-down		Sharing	
Predictor	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2
Block 1		.04*		.03		.03		.08***
Sex (Male)	−.01		−.05		.05		−.16**	
Ethnicity (Caucasian)	−.12*		−.07		−.04		−.18**	
Religiosity (religious)	< .01		.02		<−.01		.09	
Moral values	−.05		.13*		−.15*		−.20**	
Trait-like fear of isolation	−.13*		<−.01		.10		−.06	
Block 2		.04**		.52***		.35***		.01
Technical online anonymity (high vs. low)	.09		−.02		.01		−.01	
Technical online anonymity (medium vs. low)	.05		−.04		−.06		.02	
Unfavorable opinion climate	−.17**		−.72***		.59***		−.11*	
Block 3		.14***		.02		.04**		.11***
State-based fear of isolation	−.32***		−.03		−.17**		−.19**	
Reference group support (family)	<−.01		<−.01		.10*		−.05	
Reference group support (friends)	.03		.02		.01		.07	
Issue involvement	.21***		<.01		.08		.21***	
Perceived congruity with news reported opinion	−.03		−.04		−.03		.13**	
Perceived online anonymity	.16*		.15**		.03		<.01	
Total R^2		.18***		.54***		.39***		.16***

*p < .05. **p < .01. ***p < .001.

Next, Hypothesis 2 investigated the predictions of state-based fear of isolation on willingness to use click speech. The models indicated significant negative effects on commenting (β = −.32, p < .001), giving a thumbs-down to other commenters (β = −.17, p = .001), and sharing the news report (β = −.19, p = .001), supporting Hypotheses 2(a), 2(c), and 2(d). State-based fear of isolation also negatively predicted giving other commenters a thumbs-up, but the effect did not reach significance (β = −.03, p = .449). Thus, Hypothesis 2(b) was not supported.

In addition, Hypothesis 3—the positive predictions of reference group support from family and friends on willingness to use click speech—received only limited support. Specifically, support from family positively predicted giving other commenters a thumbs-down (β = .10, p = .022), but not the other types of click speech. Also, the effects of support from friends on all types of click speech were negligible. Thus, only Hypothesis 3(c) was partially supported.

Hypothesis 4 examined the positive effects of issue involvement on willingness to use click speech. The results across the four models revealed significant predictions on commenting (β = .21, p < .001) and sharing (β = .21, p < .001). Yet, the effects on giving the commenters either a thumbs-up (β = .004, p = .929) or a thumbs-down (β = .08, p = .094) failed to attain significance. As a result, Hypotheses 4(a) and 4(d) gained support, but not Hypothesis 4(b) or 4(c). In addition, mixed results were found for Hypotheses 5(a) and 5(b). That is, the positive effect of perceived congruity with the reported opinion in online news reports on willingness to post comments failed to gain support (β = −.03, p = .604), whereas the effect on willingness to share the news to the users' SNSs was supported (β = .13, p = .016).

Furthermore, Hypothesis 6 predicted that perceived online anonymity would mediate the relationships between technical anonymity on willingness to use a variety of types of click speech modalities. A. F. Hayes' (2013) PROCESS macro (Version 2.16.3) for SPSS was employed using Model 4 with 5,000 bias-corrected bootstrap samples and 95% bias-corrected confidence intervals. Four separate models were tested by entering willingness to comment, give a thumbs-up, give a thumbs-down, and share as the outcome variables, respectively. Technical online anonymity was entered as the independent variable in the four models with the multi-categorical option, which converted this three-factor variable into dummy-coded binary variables: "high versus low" and "medium versus low." Perceived online anonymity was entered as the mediator in the models. The other predictors and control variables were entered as covariates.

The results (see Table 3) showed that perceived online anonymity fully mediated the relationship between technical anonymity and commenting, and partially mediated the relationship between technical anonymity and giving a thumbs-up. However, perceived online anonymity did not mediate the relationship between technical anonymity and giving a thumbs-down. In sum, Hypotheses 6(a) and 6(b) were supported, but not Hypothesis 6(c) or 6(d).

Table 3. Total, Direct, and Indirect Effects of Technical Online Anonymity on the Dependent Variables (N = 339).

	Commenting		Thumbs-up		Thumbs-down		Sharing	
Effect	*b* (*SE*)	*p*	*b* (*SE*)	*p*	*b* (*SE*)	*p*	*b* (*SE*)	*p*
Total effect								
High vs. low	.37 (.20)	.07	−.09 (.18)	.63	.05 (.19)	.80	.00 (.18)	1.00
Medium vs. low	.30 (.21)	.15	−.16 (.19)	.40	−.17 (.20)	.40	.13 (.19)	.49
Omnibus	R^2 = .01	.15	R^2 < .01	.70	R^2 < .01	.53	R^2 < .01	.73
Direct effect								
High vs. low	.01 (.24)	.96	−.49 (.21)	.03	−.03 (.24)	.92	−.01 (.22)	.97
Medium vs. low	.22 (.21)	.29	−.25 (.18)	.18	−.19 (.20)	.36	.13 (.19)	.50
Omnibus	R^2 < .01	.51	R^2 = .01	.07	R^2 < .01	.61	R^2 < .01	.74
	b (*SE*)	95% CI	*b* (*SE*)	95% CI	*b* (*SE*)	95% CI	*b* (*SE*)	95% CI
Indirect effect via perceived online anonymity								
High vs. low	.36 (.15)	[.05, .67]	.41 (.14)	[.15, .69]	.07 (.15)	[−.24, .37]	<.01 (.13)	[−.24, .25]
Medium vs. low	.08 (.05)	[.01, .22]	.09 (.05)	[.02, .22]	.02 (.04)	[−.05, .10]	<.01 (.03)	[−.06, .07]
Omnibus	.06 (.03)	[.01, .12]	.07 (.02)	[.03, .12]	.01 (.02)	[−.04, .06]	<.01 (.02)	[−.04, .04]

Discussion

Employing SoS theory as the theoretical framework, study findings substantially verified the determinants of online users' willingness to comment, use PDAs to show less explicit approval or disagreement, and share news information. This evidence also enabled comparisons of the magnitude of each suppressor and facilitator across the diverse types of click speech, improving our understanding of this classic theory and its application to online communication in the era of Web 2.0.

Study results also revealed that fear of isolation fostered the SoS phenomenon in online news discussions across different types of click speech. Although the effect sizes suggest that this determinant exerted a greater influence in discouraging individuals to post comments—relative to giving other commenters a thumbs-up or a thumbs-down—such a fear undermined people's willingness to express opinions generally, even if their opinions could be disclosed less explicitly. In other words, the "silence" resulting from social isolation concerns not only represents a suppression of individuals' verbal (or text-based) articulation, but also indicates their withdrawal of paralinguistic communication. By focusing on diverse types of opinion expression online, this study thus uncovers emerging influences resulting from fear of isolation, reaffirming the crucial role that this concept plays in SoS theory.

Compared with fear of isolation, which is the more subjective, emotional determinant of the SoS phenomenon, an unfavorable opinion climate describes the more objective situation in which individuals hold views that run contrary to the majority. Extending from the literature (e.g., Nekmat & Gonzenbach, 2013), this study further identified opinion climate as a significant predictor of people's willingness to adopt several types of click speech. Specifically, those who were the minority in the online discussion about

abortion expressed less interest in posting their comments, sharing news reports, or giving other commenters a thumbs-up.

However, the same individuals were found more likely to give a thumbs-down to what the other commenters addressed. As a thumbs-down symbolizes dislike or disapproval, the results revealed that this paralinguistic cue serves as an avenue for the minority in online discussions to disclose their standpoint against the dominant voice. Given that the effects found in the two PDA models were particularly robust, the present findings verified a less explicit and obtrusive path for expressing deviant opinions. Although PDAs have been previously shown to be meaningful indicators of support (R. A. Hayes et al., 2016; Pang et al., 2016), these results show that they can offer a diversity of expression in response to online content. In an era when online media allow multiple forms of messages applied for communication, PDAs serve as significant alternatives to remaining silent, consistent with SoS theory.

Among the facilitators of opinion expression, moreover, issue involvement was a significant predictor of posting comments and sharing the relevant news reports to one's own SNSs. The results indicated that those more involved in the issue of abortion were more willing to reveal their viewpoints by engaging in numerous types of opinion expression, ranging from the more explicit comments to the more implicit endorsement. This corroborates and extends previous research on the link between online news discussion and political interest and involvement (Holt et al., 2013; Kushin & Yamamoto, 2010).

On the other hand, mixed results were found regarding the influence of online anonymity. Specifically, perceived online anonymity mediated the effects of technical anonymity on willingness to comment and give other commenters a thumbs-up in online news discussions. The findings affirm that the perceived aspect of online anonymity can better reflect one's communication behaviors (e.g., Anonymous, 1998). Also, the results underline the unidentifiability of personal information (e.g., social media accounts) that motivates individuals to more explicitly express their opinions or give approval in online news discussions.

Yet, perceived online anonymity failed to predict one's willingness to give other commenters a thumbs-down. Thus, being more or less anonymous in online news discussions may not be a primary concern for those revealing their dissenting views in a less explicit way. Given that online news media are trying to limit the anonymous use of posting comments to reduce such incivilities as flaming and trolling (e.g., Chua & Banerjee, 2017), the PDAs—including emojis, emotion reactions, and rating stars—may emerge as the second-best avenue for individuals to signal their deviant views. Given that users are less worried about their information identifiability when expressing paralinguistic disapprovals, practitioners of online communication platforms may develop more functions for these less explicit expressions to encourage diverse opinions revealed in cyberspace.

Finally, evidence also verified the influences of reported poll results in online news and reference groups on one's online opinion expression. In particular, individuals' perceived congruity with the reported opinion promoted their willingness to share the news in their SNSs, indicating that they are more inclined to serve as opinion leaders to disseminate the reports they agree with to their social network contacts. News sharing is a means for the users to express their recognition and endorsement of the news content.

Moreover, social support from family members fostered one's tendency to give a thumbs-down to other commenters' opinions. People are thus more willing to reveal their disagreement with the majority, in an online news discussion, when they have more family who back up their views. This finding is consistent with SoS research on non-mediated interactions (e.g., Dalisay et al., 2012). Although neither of these two facilitators significantly predicted willingness to post comments—both apparently failing to motivate more explicit expression online—this study pinpointed the strengths of these two influences on encouraging more implicit assent or less explicit dissent.

Although this study substantially promotes the understanding of using click speech for online opinion expression in various aspects, a few limitations should be considered. First, this study used a sample of college students to examine the factors affecting one's willingness to be engaged in diverse types of click speech offered by online news comment sections. Although student samples are widely used in research exploring the uses and effects of new communication technologies (e.g., Pang et al., 2016; Sherrick & Hoewe, 2018), study results may not represent the behavioral tendencies of the users from other populations. Second, because this study focused on opinion expression in the scenario of online news comments, caution should be exercised when attempting to generalize the findings to using click speech on other online communication platforms (e.g., social media) for message exchange. Future research may use this framework across more diverse samples and online platforms. Additional evidence will help substantiate the strengths of each type of click speech for facilitating opinion expression in cyberspace. Third, the external validity of the pictorial stimulus of online news discussions employed in this study may be improved by switching to a more interactive simulated comment section that allows the participants to actually address messages and control the features of click speech. Finally, the focus on abortion—arguably the most divisive and entrenched issue in American politics—represents a potential study limitation. Later work should repeat this research with a wider variety of issues (e.g., gun control and border security) for which the opinion climate is split but polarized.

Conclusion

Consistent with SoS theory, this study found that state-based fear of isolation generally reduces online opinion expression (as gauged by online users' willingness to comment, use PDAs to show less explicit approvals or disagreements, and share the news information). In addition, an unfavorable opinion climate reduces one's willingness to comment and give other commenters a thumbs-up, but interestingly encourages the tendency to give a thumbs-down. Reference group support also fosters thumbs-down expressions. Perceived online anonymity facilitates commenting, and opinion congruity with the news and issue involvement both motivate news sharing. These variegated forms of click speech thus demonstrate that opinion expression in cyberspace ranges from the more explicit verbal commenting to more implicit endorsement and disapproval, expanding the applicability of SoS theory and its related concepts to modern online communication.

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