

Perceived Social Sanctions and Deindividuation: Understanding the Silencing Process on Social Media Platforms

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This study aimed to understand how social sanctions and deindividuation affect people's willingness to express their opinions on social media. Previous research has demonstrated that specific affordances of social media platforms may impact opinion expression, but the psychological mechanisms behind this behavior still need to be fully understood. To better understand the deindividuation process across social media platforms, this study examines the variables of anonymity and identifiability using the social identity model of deindividuation effects and the spiral of silence theory. We surveyed 535 people online and found that deindividuation significantly moderates the relationship between social sanctions and willingness to express an opinion. Additionally, we discovered that users perceive a higher level of deindividuation on Twitter than on Facebook. This research sheds light on the complex interplay among affordances, group dynamics, and opinion-expression behavior on social media platforms.

Keywords: spiral of silence, deindividuation, Facebook, Twitter

The increased usage of social media over the last decade helped establish the widespread and venerated position social media platforms hold in modern American communicative practices (Hanson, Drumheller, Mallard, McKee, & Schlegel, 2010; Perrin, 2015). When stating one's opinion on current issues and controversies in modern society, social media platforms such as Facebook and Twitter are routinely used by individuals engaged in discursive communication processes (Bennett, Segerberg, & Walker, 2014). These are prominent social media platforms that create space for public discussions on important issues such as racial (#BlackLivesMatter) and gender inequality (#MeToo; Shahin, Nakahara, & Sánchez, 2021). Despite this, one cannot assume that everyone is equally willing to discuss sensitive topics in online spaces.

The spiral of silence (SoS) theory suggests that people stay silent if they perceive their opinion is not supported by the majority (Noelle-Neumann, 1974). The primary reason for their silence is their fear of isolation (FOI). The literature identified two types of FOI: Trait-like FOI (Hayes, Matthes, & Eveland, 2013)

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and situational FOI (Neubaum & Krämer, 2018). A trait-like FOI is related to one's character, whereas a situational FOI is linked to circumstances. Therefore, depending on the circumstances, a person's perception of isolation can differ (Neuwirth, Frederick, & Mayo, 2007).

In their article, Rössler and Schulz (2014) suggested that FOI can take various forms. Several scholars supported the same contention and argued that people might consider how their network would react before expressing their minority views (Neubaum & Krämer, 2018; Rössler & Schulz, 2014), and if they do not conform to the majority, they may expect punishment from their network (Fox & Holt, 2018; Rössler & Schulz, 2014). Rössler and Schulz (2014) defined this expected punishment as "expected social sanctions" (p. 102). In that sense, individuals behave and act according to their perceived social responses to their opinions when their opinions differ from that of the majority.

Previous research has shown that expected social sanctions, a vital element of the SoS theory, remain a significant predictor of opinion expression in online environments (Neubaum & Krämer, 2018; Rui, Cui, & Liu, 2020). In addition, social media platforms provide new environments for opinion expression, so examining opinion climate alone may not be sufficient to understand expected social sanctions and opinion-expression behavior (Rössler & Schulz, 2014). In fact, research has shown that specific affordances of social media platforms may significantly impact an individual's willingness to express their opinion (e.g., Fox & Holt, 2018; Neubaum & Weeks, 2022). However, we are yet to fully understand the psychological mechanism behind online opinion-expression behavior on social media platforms.

For this reason, we examine two main variables (anonymity and identifiability) of the social identity of the deindividuation model to better understand the psychological process of opinion expression. Scholars such as Neubaum and Weeks (2022) and Zimbardo (1969) suggest that the perception of anonymity (knowledge of others) and lack of identifiability may contribute to perceived deindividuation (Neubaum & Weeks, 2022; Zimbardo, 1969). People who feel deindividuated are less capable of regulating their behavior as they are less likely to care what others think of their actions (Bishop, 2013). Thus, people become less self-aware of others, and as a result, they may feel less responsible for their actions and less likely to be afraid of possible social sanctions (Postmes & Spears, 1998; Prentice-Dunn & Rogers, 1982; Rössler & Schulz, 2012).

This study has several objectives. First, it aims to investigate the effects of two different social sanctions, FOI and fear of personal attacks (FPA) on opinion expression across two social media platforms (Facebook and Twitter). Second, it seeks to examine the role of deindividuation and affordances in the process of the SoS on social media. Overall, this study aims to deepen our understanding of the psychological mechanisms that underlie opinion expression on social media and how these mechanisms may be influenced by anonymity and identifiability. Finally, by examining these variables, the study aims to gain a better understanding of the factors that influence individuals' decisions about whether or not to express their opinions on sensitive topics in online spaces.

The Spiral of Silence

The central premise of Noelle-Neumann's (1974) argument is that when individuals perceive themselves as holding a minority opinion—based on their interpretation of environmental cues—they remain silent, resulting in them adopting the opposing viewpoint or remaining disengaged from discourse for fear of social isolation. Therefore, fundamental to the SoS theoretical framework is Noelle-Neumann's (1974) conclusion that individuals will refrain from voicing their opinion if they perceive themselves as a member of the minority. With the changing media environment, scholars have discussed the theory's applicability to the new media environments (Chaudhry & Gruzd, 2020; Gearhart & Zhang, 2015). Several studies have concluded that FOI still impacts people's expressive behaviors on social media platforms (Fox & Holt, 2018).

Numerous researchers have adopted the traditional approach of the SoS theory and examined the effects of high and low levels of FOI on opinion expression (Gerhart & Zhang, 2015; Porten-Cheé & Eilders, 2015). While previous research has explored the impact of FOI on opinion expression in online spaces as well (e.g., Chan, 2018), more recent studies have argued that FOI may not be sufficient in explaining the consequences of expressing an opinion online (Neubaum & Krämer, 2018; Rössler & Schulz, 2014; Rui et al., 2020). These recent studies suggest that FOI may have additional layers that may differentially impact opinion expression (Neubaum & Krämer, 2018; Neuwirth et al., 2007). According to Neuwirth and colleagues (2007), FOI represents a negative emotional state associated with expressing one's opinions although there is no explicit definition of this concept. In this sense, FOI may be related to "personality, issues, or situations" (Neuwirth et al., 2007, p. 452). For example, an individual may fear isolation if they perceive that the majority on a controversial issue does not support their opinion (a minority situation). This fear may be influenced by previous negative experiences, which can negatively impact an individual's personality and decrease their likelihood of expressing their opinions (Neuwirth et al., 2017). Another concept related to this is communication apprehension (CA), which refers to the anxiety-induced fear associated with anticipated communication (McCroskey, Beatty, Kearney, & Plax, 1985). CA is similar to FOI in that it is a trait-based fear (Neuwirth et al., 2007). It is, therefore, important to consider and control CA in the study to mitigate the influence of personality factors on research results.

Apart from trait-based FOI (CA), researchers found that users tend to self-censor their opinions because of potential social sanctions (Neubaum & Krämer, 2018). According to the literature, expected sanctions may take different forms, and people may react to these sanctions differently (Neubaum & Krämer, 2018; Rui et al., 2020). For example, Mosher (1989) suggested that people may be afraid of "being judged" by other people when discussing issues. Moreover, Neubaum and Krämer (2018) found that online users worry about attacks, negative judgments, and social isolation. Overall, online social sanctions can be manifested in a variety of ways, such as isolation concerns, personal attacks, unfriending, and/or blocking (Yun & Park, 2011). Again, FOI is exacerbated by the consequences of a particular condition, such as an expectation of punishment from one's network (Neuwirth et al., 2007). Thus, online social sanctions are not limited to social isolation. Moreover, the fear of social sanctions may also change an individual's perception of the opinion climate, leading them to perceive a more significant majority against their opinion than actually exists (Rössler & Schulz, 2014). For example, Ordonez and Nekmat (2019) found that people were likely to refrain from participating in online discussions when they were attacked with uncivil comments.

Thus, we hypothesize that Facebook and Twitter users will be less likely to express their opinions when they perceive high levels of isolation and personal attacks.

H1: FOI would be negatively related to one's willingness to express an opinion on (a) Facebook and (b) Twitter.

H2: FPA would be negatively related to one's willingness to express an opinion on (a) Facebook and (b) Twitter.

Affordances and the SoS

The SoS theory posits that individuals may refrain from expressing a minority opinion due to fear of social isolation and social sanctions (Noelle-Neumann, 1974). Noelle-Neumann (1974) mainly focused on how the public at large may impact individuals' opinions in public spaces. She, however, did not consider how different social contexts and ties may affect people's opinion-expression behavior and their expectations of social sanctions. According to classic SoS theory, people tend to expect social sanctions when they express minority opinions, regardless of their social environment or audience (Noelle-Neumann, 1974). While the classic SoS theory emphasizes the costs of expressing opinions, it does not consider how different social contexts and ties may affect an individual's expectations of social sanctions and their willingness to express their opinion (Noelle-Neumann, 1974). As Ho and McLeod (2008) suggested, group hierarchies will disappear if there are no social cues. Therefore, people's networks may lose their influence on opinion-expression behaviors in online environments. Accordingly, Rössler and Schulz (2014) argue that social sanction expectations are influenced not only by the perceived majority but also by "general characteristics of communication" (p. 105) spaces (Oz, Zheng, & Chen, 2018). In online environments, such as social media platforms, the lack of social cues can make it difficult for individuals to calculate the costs associated with expressing an opinion. In these contexts, the platform affordances, including anonymity and identifiability, become important factors in understanding opinion-expression behavior (Neubaum & Weeks, 2022; Rössler & Schulz, 2014). Rössler and Schulz (2014) argued that anonymity and identifiability disappear when two people meet offline. However, in online environments, one can identify another but remain anonymous to them, or one may not identify another and choose to reveal their own identity (Rössler & Schulz, 2014). The affordances of anonymity and identifiability differ among online spaces, and these affordances may influence opinion-expression behavior (DeVito, Walker, & Birnholtz, 2018; Neubaum & Weeks, 2022). Rather than being characteristics of a platform, affordances are a manifestation of user-platform relationships. Evans, Pearce, Vitak, and Treem (2017) define them as "the complex relationship between a product or technology and its potential users" (p. 36). Affordances are a crucial aspect to consider when examining the SoS as they can influence the relationship between social sanction expectations and willingness to express an opinion (Fox & Holt, 2018). For instance, Neubaum and Weeks (2022) propose that affordances may either increase or decrease an individual's expectations of social sanctions. Researchers have mainly focused on the affordances of anonymity and identifiability to understand the opinion-expression behaviors of social media users (e.g., Evans et al., 2017; Fox & Holt, 2018; Neubaum & Weeks, 2022) as these affordances are particularly relevant for calculating the potential costs of expressing an opinion.

Identifiability is one of the most critical affordances for online environments. A user's identifiability can be defined by how much information is visible to others about them (Evans et al., 2017; Reicher, Spears,

& Postmes, 1995). Identifiability may vary across social media platforms. The community-based social network Facebook, for example, may offer higher identifiability than Twitter because the former's users tend to connect with friends and family (Ellison, Blackwell, Lampe, & Trieu, 2016; Fox & Holt, 2018). Scholars suggested that identifiability may impact social media users' opinion-expression behaviors (Van Duyn, 2018). For example, research has shown that low identifiability encourages anti-normative behaviors and reduces accountability and social cost (Lowry, Zhang, Wang, & Siponen, 2016; Rössler & Schulz, 2014). As a result, people tend to express their political views more when they feel less identifiable (Wu & Atkin, 2018).

One of the most examined affordances that might impact opinion expression is anonymity. Anonymity can be defined as "what the individual knows about others" (Rössler & Schulz, 2014, p. 106). Apparently, when people can identify others, they are less likely to express their political views (Luarn & Hsieh, 2014). Anonymity (knowledge of others) is vital because several studies suggest that not all types of audiences have the same impact on opinion expression (Hogan, 2010). In particular, some specific ties may impact people's opinion expression more than others. For example, Rui and colleagues (2020) suggested that the "perceived importance of social media contacts" is a significant indicator for expressing an opinion in online spaces (p. 878). Users tend to evaluate the social cost of their expressions (social sanctions) based on their network and avoid social and economic costs, such as losing real-world relationships if they are highly familiar with others on social media (Marder, Joinson, Shankar, & Thirlaway, 2016). In addition, research has also shown that people tend to emotionally attach to people close to them (Wellman & Wortley, 1990). From this perspective, the strong-versus-weak-tie argument is closely related to identifiability and anonymity affordances (Granovetter, 1973). Especially on some social media platforms, Facebook, for example, people tend to connect with their existing ties (Ellison et al., 2007; Rui et al., 2020). As a result, users reveal a great deal about themselves on Facebook. This allows users to identify their networks and with whom they deal and also allows their networks to identify them. Due to this, users can perceive high social costs to expressing opinions on identifiable networks like Facebook (Rui et al., 2020).

Although the literature established a relationship between platform affordances and social sanctions, it did not explain why this relationship occurs. Next, we will connect affordances, the SoS, and the social identity model of deindividuation effects (SIDE) and explain how social sanctions, willingness to express an opinion, and affordances are related.

The SIDE: Bringing Anonymity and Identifiability Together

The 19th-century psychologist Le Bon (2007) argued that the collective mind of a crowd has the potential to cause people to act irrationally and engage in behavior that deviates from accepted social norms (Giddings, 1897; Postmes & Spears, 1998). In other words, individuals' behavior might be different when they are in a crowd because they lose their self-identity. Bon's early ideas on how being in a group may impact individual behavior were the basis for the deindividuation theories (Postmes, Spears, Sakhel, & De Groot, 2001). In later years, Festinger, Pepitone, & Newcomb (1952) investigated the phenomenon suggested by Le Bon and coined the term deindividuation. Festinger and colleagues (1952) defined deindividuation as losing self-awareness in a group setting (Festinger et al., 1952). Other scholars further argued that even though the deindividuation process may be influenced by a group, it is also an "intra-

individual" process that may be influenced by several factors such as reduced identifiability and anonymity (Zimbardo, 1969).

As deindividuation research developed, it primarily focused on the relationship between self-awareness and group-conforming behavior (Reicher et al., 1995). Consequently, the SIDE was developed (Postmes et al., 2001); this model suggests that identifiability and anonymity cause people to focus more on either their social or their personal identity (Rössler & Schulz, 2014). Contrary to the early deindividuation research, this model suggests that these factors do not cause people to "lose self-awareness" (Postmes & Spears, 1998, p. 240). Instead, they may make our social identity more prominent, which can change how we see others and ourselves in social situations. Rössler and Schulz (2014) refer to this interaction between anonymity-identifiability and identities as "the cognitive dimension of the SIDE model" (p. 108). In that sense, the SIDE explains how the prominence of social identity is influenced by the availability of information about the individual. However, it is crucial to consider that this process can only occur when there is already a sense of group membership. Thus, the process of identity may be shaped by the deindividuation process (a combination of identifiability and anonymity), and people may conform to group norms or pursue their interests depending on the salient identity. If social identity is salient, people tend to conform to group norms; however, if personal identity is salient, they tend to focus on their own needs (e.g., intellectual concerns and tastes; Reicher et al., 1995).

Personal identity was defined by Turner (1982) as feeling competent and focusing on one's own tastes and intellectual concerns. In contrast, social identity is a person's perception of themselves based on their membership in a group (McLeod, 2008). Depending on which identity is salient, individuals may refrain from certain behaviors (Turner, 1982). In particular, individuals will refrain from behaviors that their social group may disapprove of if social identity is salient. This behavior is primarily caused by individuals' desire to be evaluated positively by their groups (Tajfel, Turner, Austin, & Worchel, 1979). Rössler and Schulz (2014) contend that the SIDE's argument is closely related to the SoS's central argument: Fear of social sanctions. In the SoS theory, individuals avoid expressing a minority opinion (avoiding behavior) because the majority disapproves of it. A similar argument is made by the SIDE, which suggests that people will not express opinions if there is a possibility of being disapproved by their group (Postmes et al., 2001). In that sense, the SoS argues that individuals conform to the majority norm. Similarly, the SIDE argues that individuals tend to conform to group norms when social identity is salient (Rössler & Schulz, 2014). The question then becomes, what causes deindividuation, and how does deindividuation relate to personal and social identity? From this point on, we will build on Rössler and Schulz's (2014) arguments on "the strategic dimensions of the SIDE model" (p. 109) to explain why we expect to see anonymity and identifiability affordances linked to the deindividuation process and how the deindividuation process impacts opinion expression on social media.

Prior SIDE literature indicates that individuals act strategically when faced with strong groups (Postmes et al., 2001). Individuals especially consider power relations between themselves and their groups before expressing opinions. Scholars of this literature argued that the power relations between the group and the individuals are moderated by identifiability and anonymity (Reicher et al., 1995; Rössler & Schulz, 2014). This may seem similar to the impact of anonymity on accountability in traditional deindividuation theory. However, unlike deindividuation theory, the SIDE takes into account the intergroup context in which

identifiability and anonymity occur. Therefore, a lack of accountability does not lead to the disinhibited or random anti-normative behavior of individuals that deindividuation theory addresses. However, a lack of accountability may encourage users to express minority opinions on social media platforms (Fox & Holt, 2018). Rössler and Schulz (2014) argued that when users are identifiable to the rest of their network, they may expect high social sanctions due to increased accountability. Nevertheless, when users are unaware of others (non-anonymous environment), they still expect high social sanctions because they perceive the group as more homogeneous.

In this study, however, we propose that low anonymity and high identifiability likely result in high expectations of social sanctions (see Figure 1). This argument is supported by the idea that when users can identify their network on social media, they are more likely to consider the importance of their strong ties and experience increased emotional attachment (Rui et al., 2020). In contrast, when users cannot identify their network, social identity may diminish, and personal identity may become salient. Furthermore, when users believe that their identities will not be easily noticed on social media platforms, they may feel that their actions cannot be linked with their actual identities, leading to a lack of accountability (Fox & Holt, 2018). Additionally, a lack of knowledge of others in their network may make it difficult for users to recognize them, further contributing to the deindividuation effect (Rössler & Schulz, 2014).

Again, the SIDE's conformity to in-group norms resembles the SoS's silencing process due to concerns over social sanctions from the majority. There are similarities between the conformity to in-group norms in the SIDE and the perceived majority in the SoS theory. However, a key distinction is that users tend to conform to group norms to avoid being excluded from "certain circles" in the SIDE, while the SoS theory sees the majority as the public opinion (Noelle-Neumann, 1974; Rössler & Schulz, 2014). On social media platforms, however, users may be more concerned with their networks' opinions than public opinion when expressing their views. On the one hand, as found by Rui and colleagues (2020) Facebook users, for example, may be self-conscious about expressing their opinions on controversial issues due to the perceived importance of their Facebook network. Additionally, Marder and associates (2016) suggest that individuals may have different concerns depending on the audience, considering the potential social and economic consequences of expressing their opinions. On the other hand, some social media platforms, like Twitter, may afford some anonymity. Even though users may not be fully anonymous on Twitter, they still do not have to reveal their actual identity or any other personal information (Theocharis, Barberá, Fazekas, Popa, & Parnet, 2016). Moreover, connecting with like-minded others and a lack of reciprocal relationships on Twitter may cause them to feel deindividuated. As a result, they might be less concerned about conforming to majority norms and the consequences of their actions (Halpern & Gibbs, 2013).

It is, therefore, possible that perceived anonymity and identifiability (deindividuation) may differ between Facebook and Twitter. Due to this, different perceptions of deindividuation may affect users' level of fear of social sanctions. Thus, we proposed the following research questions:

RQ1: What are the differences, if any, between Facebook and Twitter in terms of users' perceived deindividuation?

RQ2: What are the differences, if any, between Facebook and Twitter in terms of users' perceived FOI?

RQ3: What are the differences, if any, between Facebook and Twitter in terms of users' perceived personal attacks (FPA)?

In general, the perceived majority in the SoS theory aligns closely with the group in the SIDE (Rössler & Schulz, 2014). Therefore, anonymity and identifiability may contribute to the deindividuation effect such that social media users with high levels of deindividuation are more likely to express opinions on controversial topics due to reduced evaluation concerns. As a result, we expect that deindividuation will moderate the relationship between social sanction concerns and willingness to express an opinion. In other words, the impact of social sanction concerns on opinion expression may vary depending on the level of deindividuation experienced by the individual. This leads to the following hypotheses:

H3: Perceived deindividuation would moderate the relationship between FOI and one's willingness to express an opinion on (a) Facebook and (b) Twitter.

H4: Perceived deindividuation would moderate the relationship between FPA and one's willingness to express an opinion on (a) Facebook and (b) Twitter.

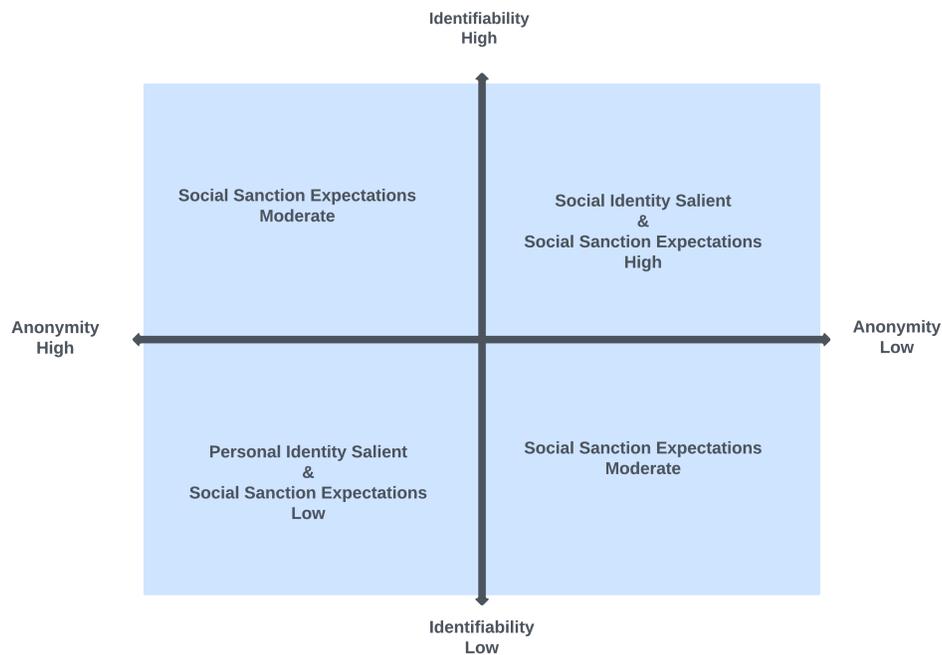


Figure 1. Proposed model of the interaction of identifiability-anonymity and social sanction expectations.¹

¹ It should be noted that Rössler and Schulz (2014) created a similar model. However, the key distinction between our model and theirs is related to anonymity. We argue that high anonymity will lead to low level of social sanction expectations.

Method

Sample and Data Collection

An online survey ($N = 535$) was conducted to test the hypotheses. The Qualtrics Survey Company recruited 543 survey respondents, who were compensated by Qualtrics. The survey required individuals to actively use Twitter and Facebook for opinion expression and have at least 50 followers or friends on each platform. To confirm active usage, two screening questions were used, asking respondents if they checked Facebook and Twitter accounts at least once a week and expressed their opinions about political and civic issues. We invited only those respondents who met these criteria and were at least 18 years old. This study included 543 participants. Our final sample consisted of 535 responses after eliminating eight incomplete responses. In addition to social sanctions and deindividuation, all respondents were asked about their willingness to express opinions online. Of all the respondents, 49.9% were female, while the remaining 50.1% were male. The average age of respondents was 34.7 years. The majority of participants (86%) had completed high school or some college education ($SD = 1.55$). Also, 66% of the respondents identified themselves as White, 28% identified as African-American, 4% as Hispanic, and 2% as other.

Procedure

The participants in this study were asked to complete an online survey to assess the variables of interest. Before proceeding with the survey, the participants were informed that the questions would pertain to discussions of racial inequality, and a definition of this term was provided. The participants were then instructed to answer the questions separately for each platform. Before answering these questions, they were asked to consider their Twitter/Facebook networks. For example, for willingness to express an opinion question, the respondents were asked, "Now please think about your Facebook network and then rate the following statements: 'I would post a comment in a comment thread on this issue,' and 'I would reshare a post related to the racial inequality issue'" on Facebook.

Measures

Willingness to Express an Opinion

This variable was operationalized based on prior research (Neuwirth et al., 2007; Priest, 2006). On a 5-point scale (1 = *not likely at all* to 5 = *extremely likely*), the respondents were asked to rate the following statements "I would share my true opinion on a racial inequality issue," "I would post a comment in a comment thread on this issue," and "I would re-tweet or reshare a post related the racial inequality issue" on Facebook ($M = 2.95$, $SD = 1.19$, Cronbach's $\alpha = .86$) and on Twitter ($M = 3.68$, $SD = 1.15$, Cronbach's $\alpha = .81$).

Independent Variables

Perceived Social Sanctions

The social sanctions variable was assessed based on the measure from Neubaum and Krämer (2018). Respondents were asked, "Now think about Facebook friends/Twitter followers: When expressing your opinion on the racial inequality on Facebook/Twitter, what sanctions would you expect from Facebook friends ($M = 3.7$, $SD = 1.18$) and Twitter followers?" ($M = 2.6$, $SD = 1.20$). The respondents rated each answer option on a 1 (*not likely at all*) to 5 (*extremely likely*) scale.

Four items (being unfriended/unfollowed, being ignored, being judged, being verbally attacked) were used to assess the respondent's expected social sanctions on Facebook. A principal components analysis (PCA) was conducted to isolate factors within those measures. Since the factors were not highly correlated, orthogonal varimax rotation was used. Based on the eigenvalues and scree plot test Cattell (1966), the PCA suggested a two-factor solution. Both factors had high reliability. The first factor was FOI ($M = 3.14$, $SD = 1.28$, Cronbach's $\alpha = .90$), which referred to the fear of being excluded and isolated and explained 69% of the total variance. The second factor was FPA ($M = 3.10$, $SD = 1.20$, Cronbach's $\alpha = .89$), which referred to rude and uncivil attacks and explained 16% of the total variance (see Table 1).

Perceived Deindividuation

The deindividuation items were borrowed from Kim and Park (2011), Hite, Voelker, and Robertson (2014), and Lowry and colleagues (2016). We made changes to the measurements so that they were adapted to the social media environment. We focused on two factors that lead to the deindividuation effect (lack of identifiability and lack of knowledge of others). These items were indexed and we created the perceived deindividuation variable. On a 5-point scale (1 = *strongly disagree*) to (5 = *strongly agree*), respondents were asked to rate four items (e.g., "I think I was not considered as a distinctive individual on Facebook/Twitter," "I don't think I can identify my friends/followers quickly by looking at their Facebook/Twitter profiles"). The items were checked for multicollinearity and reliability. Reliability numbers were high enough for Facebook ($M = 2.12$, $SD = 1.22$, Cronbach's $\alpha = .86$) and for Twitter ($M = 3.66$, $SD = 1.21$, Cronbach's $\alpha = .84$).

Network Opinion Congruency

The respondents were asked to report whether they thought their Facebook friends supported their opinion ($M = 3.20$, $SD = 1.17$), and the same was asked about their Twitter followers ($M = 3.48$, $SD = 1.19$). For each platform (Facebook and Twitter) the respondents were asked on a 5-point scale (1 = *not likely at all* to 5 = *extremely likely*) to answer the questions: To what extent do you think most of your Facebook friends/Twitter followers agree with your views on the racial inequality issue?

The control variables were demographics (age, education, gender, and race), frequency of Twitter and Facebook use, CA, and issue importance.

Table 1. Factor Loadings (PCA With Varimax Rotation) of the Two Factors Representing Expected Sanctions on Social Media.

<i>Variables</i>	<i>M</i>	<i>SD</i>	<i>Factor 1</i>	<i>Factor 2</i>
<i>Fear of Being . . .</i>			<i>FOI</i>	<i>FPA</i>
Unfriended/unfollowed	3.29	1.26	.90	
Ignored	3.35	1.24	.86	
Judged	3.13	1.25		.90
Verbally attacked	3.15	1.36		.90
% Of the total variance explained			69%	16%
Cronbach's α			.84	.90

Results

For each platform, separate hierarchical regression models were run to test the hypotheses. In the first model, gender, age, education, frequency of Facebook use, CA, issue importance, and opinion congruency variables were entered; the overall model was significant ($R^2 = .23$, $F = 4.10$, $p < .001$; see Table 2), and explained 23% of the variance in willingness to express opinions on Facebook. In the first model, only CA was significantly and negatively related to one's willingness to express an opinion on Facebook ($\beta = -.40$, $p < .001$). When the perceived deindividuation, FOI, and FPA variables were added in the second model, the overall model remained significant ($R^2 = .28$, $F = 5.20$, $p < .001$) and explained an additional 5% variance (the total of 28% variance) in willingness to express one's opinion on Facebook. In this model, both the FOI and FPA variables were negatively related to one's willingness to express an opinion on Facebook. There was no significant relationship between perceived deindividuation and one's willingness to express an opinion on Facebook. However, moderation analyses (Hayes, 2013) showed that perceived deindividuation moderates the relationships between FOI and one's willingness to express opinion. Users who perceive high levels of deindividuation on Facebook are less likely to fear isolation and more likely to express their opinions on Facebook. The second moderation analysis also showed a similar result. Users who perceive high deindividuation were less likely to fear isolation and more likely to express their opinions on Facebook. Thus, H3 and H4 were supported.

Table 2. Predicting One's Willingness to Express Opinion on Facebook.

	Model 1	Model 2
Direct effects		
Race	-.080	-.080
Gender	.030	.120
Education	-.090	.110
Age	.020	.110
Facebook use	.110	.090
CA	-.400***	-.435***
Issue importance	.110	.120
Facebook opinion congruency	.090	.080
FOI		-.570***
FPA		-.230***
Perceived deindividuation		.080
Interactions		
FOI × deindividuation		.156***
FPA × deindividuation		.134***
ΔR^2		.05
Total R^2	.23	.28

Note. Male = 1. * $p < .05$, ** $p < .01$, *** $p < .001$.

The first model of the second regression analysis suggested that while the frequency of Twitter use and network opinion congruency variables were positively related to one's willingness to express an opinion on Twitter, CA was negatively related: $R^2 = .28$, $F = 9.67$, $p < .001$. When we added perceived deindividuation, FOI, and FPA variables in the second model, the model explained an additional 7% variance: $R^2 = .35$, $F = 9.88$, $p < .001$. The second model suggested no significant relationship between FOI and one's willingness to express an opinion. However, the relationships between the perceived personal attack and one's willingness to express an opinion were significant on Twitter. Perceived deindividuation was positively related to one's willingness to express opinion on Twitter. Finally, the moderation analyses (Hayes, 2013) showed that users who perceived high deindividuation were less likely to fear isolation and personal attack; they were also more likely to express their opinions on Twitter (see Table 3).

Table 3. Predicting One's Willingness to Express Opinion on Twitter.

	Model 1	Model 2
Direct effects		
Race	-.070	-.090
Gender	.110	.090
Education	-.110	-.120
Age	-.010	-.010
Twitter use	.320***	.350***
CA	-.490***	-.470***
Issue importance	.180*	.190*
Twitter opinion congruency	.200**	.210**
FOI		.100
FPA		-.170*
Perceived deindividuation		.270***
Interactions		
FOI × deindividuation		.196***
FPA × deindividuation		.174***
ΔR^2		.07
Total R^2	.28	.35

Note. Male = 1. * $p < .05$, ** $p < .01$, *** $p < .001$.

Overall, while H1 was partially supported (FOI was not related to one's willingness on Twitter), H2, H3, and H4 were fully supported. In summary, FPA was a significant predictor of opinion expression on both platforms. Also, deindividuation moderates the relationships between FOI, FPA, and one's willingness to express opinion on both platforms. However, FOI was not a significant predictor of opinion expression on Twitter but it was on Facebook.

Table 4. Results of Paired Sample *t*-Test for Perceived FOI.

	Social Media						95% CI for Mean Difference	<i>t</i>	<i>df</i>
	Facebook			Twitter					
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>			
FOI	3.35	1.16	525	2.90	1.15	525	.81, 1.08	13.54**	524

Note. CI = confidence interval

* $p < .05$, ** $p < .01$, *** $p < .001$.

Three independent *t*-tests were run to understand whether FPA, FOI, and perceived deindividuation vary based on the platforms (RQ1, RQ2, and RQ3). According to the results, users perceive higher FOI on Facebook than on Twitter (see Table 4). The result of the second *t*-test suggested that there was no significant difference between Facebook and Twitter in terms of FPA (see Table 5).

Table 5. Results of Paired Sample t-Test for Perceived Personal Attack.

	Social Media						95% CI for Mean Difference	<i>t</i>	<i>df</i>
	Facebook			Twitter					
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>			
<i>FPA</i>	3.37	1.23	528	3.31	1.34	528	-.012, .15	1.69 ^{ns}	527

Note. ns = not significant. * $p < .05$, ** $p < .01$, *** $p < .001$.

Our final *t*-test result showed that social media users perceive higher deindividuation on Twitter than on Facebook (see Table 6). Overall, while users perceive higher FOI on Facebook than on Twitter, they perceive higher deindividuation on Twitter than on Facebook. However, there is no significant difference between users' perceptions of personal attacks on these platforms.

Table 6. Results of Paired Sample t-Test for Perceived Deindividuation.

	Social Media						95% CI for Mean Difference	<i>t</i>	<i>df</i>
	Facebook			Twitter					
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>			
<i>Perceived deindividuation</i>	2.35	1.44	534	3.65	1.49	534	.81, 1.08	6.91 ^{***}	533

* $p < .05$, ** $p < .01$, *** $p < .001$.

Discussion

Given the importance and diversity of social media platforms, this study provided important new insights to understand the impact of the SoS, affordances, and the deindividuation process on social media. We reached a few interesting conclusions using an online survey for our analysis and asking questions regarding the racial inequality issue.

First, we found that users who have high levels of perceived deindividuation are more likely to overcome their fears of social sanctions, including FOI and FPA, on both Facebook and Twitter. This suggests that deindividuation makes users feel more comfortable expressing their opinions on sensitive issues on social media. Previous research on the SoS has primarily focused on the role of opinion congruency, or the perceived opinion climate, in shaping opinion expression behavior. Our study, however, indicates that when individuals feel deindividuated, opinion climate becomes less important, and users feel less accountable for their actions on social media (Rössler & Schulz, 2014). This finding highlights the complex interplay between deindividuation and opinion expression on social media and the need to consider other sociopsychological factors in understanding the SoS process.

There has been a significant amount of research on the impact of anonymity on opinion expression on social media (e.g., Wu & Atkin, 2018). However, some studies have found that perceived anonymity does not necessarily reduce concerns about social sanctions but rather decreases social context cues (Wu & Atkin, 2018). This highlights the importance of understanding other sociopsychological factors (such as

affordances) that may influence opinion expression and the SoS process on social media as these platforms are not entirely anonymous. In this study, we posited that deindividuation occurs when high levels of anonymity interact with low identifiability. The literature suggests that deindividuation can lead to a reduction in strategic self-presentation and accountability concerns (Neubaum & Weeks, 2022; Spears & Lea, 1994). Our results support this idea as we found that social media users who feel deindividuated are more likely to express their opinions and have lower concerns about social sanctions. These findings suggest that perceptions of deindividuation play a significant role in shaping the SoS process on social media. Future research could explore various aspects of the deindividuation process as social media platforms often feature varying levels of anonymity, overlapping networks, and peer-to-peer monitoring (Chen, 2018).

In this study, we also argued that users' experiences might differ on social media platforms due to the platforms' unique characteristics and affordances. Our results suggested that users perceive higher deindividuation on Twitter versus Facebook and perceive higher FOI on Facebook versus Twitter. These results could be explained by network differences and the unique characteristics of each platform. In terms of network difference, we argued that people tend to connect with their existing ties (relationship-based) on Facebook (Chen, 2011), and Facebook offers a reciprocal friendship structure. Thus, users might be more concerned about maintaining their reciprocal relationships on Facebook than their relationships on Twitter (Rousseau, Frison, & Eggermont, 2019). Also, due to the reciprocal nature of Facebook's friendship structure, users might imagine close friends as their audience, while in their perception, their Twitter followers barely involve friends (community-based; Himelboim, McCreery, & Smith, 2013). So, considering close ties as their audiences might shape users' opinion-expression strategies, and users might perceive Facebook as a "threatening environment" when expressing an opinion on a sensitive issue (Neubaum & Krämer, 2018, p. 160). Similarly, other research has also found that the perceived audience on professional networking platforms, such as LinkedIn, may impact users' self-presentation strategies and their likelihood of expressing opinions. Thus, they tend to be more civil, and they employ different self-presentation strategies when they express their opinions on LinkedIn. Our findings contradict the notion that social media users primarily rely on the opinion climate in online discussions, instead they highlight the importance of specific circles in influencing opinion expression. As Rui and colleagues (2020) have argued, Facebook users may perceive a higher social and economic cost to expressing their opinions on this platform due to the perceived importance of their audience. This suggests that the perceived audience on Facebook may be a key factor in determining the willingness of users to express their opinions. On the other hand, Twitter offers some anonymity, and the relationship among users is not reciprocal. Following a user on Twitter does not connect two users, and users follow strangers and are followed by strangers (community-based; Chen, 2011; Himelboim et al., 2013). Thus, Twitter users' imaginary audiences might be more like strangers and weak ties than friends and close ties. In the literature, it has been suggested that weak and distant ties may lead to a lack of knowledge of others, which could lead to deindividuation (Diener & Wallbom, 1976). The distinct characteristics of Twitter, including the prevalence of strangers and the lack of frequent contact, may create an environment in which users feel less fearful of isolation when expressing their opinions on sensitive issues. This is supported by research indicating that the FOI is generally lower among strangers and higher among direct and frequent contacts (Lee, Oshita, Oh, & Hove, 2014; Salmon & Neuwirth, 1990). This study suggests that users may conceptualize their networks differently for each platform and that their perceived audience and the communication context can influence their concerns about deindividuation and social sanctions (Wu & Atkins, 2018).

Some scholars argue that online social sanctions are not limited to isolation, but people may expect various social sanctions such as uncivil personal attacks when expressing their opinion online (Neubaum & Krämer, 2018; Rössler & Schulz, 2014). Our results suggest that FPA is significantly related to one's willingness to express an opinion on both platforms. Based on these findings, it appears that FOI does not fully explain social media users' concerns about expressing their opinions on sensitive topics, and there may be other factors such as FPA that influence users' opinion-expression behavior (Neubaum & Krämer, 2018; Rössler & Schulz, 2014). Thus, scholars need to use more precise measurements when determining the impact of sociopsychological factors on online opinion expression.

This study adds to our understanding of the SoS process by examining the role of critical sociopsychological factors, such as affordances and deindividuation, across different social media platforms. Our findings support the idea that perceived deindividuation can reduce concerns about social sanctions on social media, and that social sanctions are not independent of the communication context (Neubaum & Weeks, 2022; Wu & Atkins, 2018). Another notable contribution of this study is the examination of two different types of social sanctions across social media platforms. Previous research has often assumed that findings about social media in general can be generalized to all platforms, but this study shows that users' experiences, perceptions, and behaviors may vary significantly among platforms, highlighting the fact that social media are not a monolithic phenomenon.

Limitations and Future Research

Limitations should be noted, including caution in interpreting the effect of perceived deindividuation since this study relies on self-report surveys. Future studies could conduct experiments to understand the relationship between deindividuation and online opinion expression. Respondents answered hypothetical questions, limiting the understanding of actual responses to minority situations. Future studies could conduct experiments to address this limitation, examining different social media websites and affordances that impact opinion expression. Additionally, asking participants to complete separate questions for each platform may have led to redundancy and participant fatigue. Future studies could use different methodologies to address this issue.

Conclusion

The results shed new light on the complex interplay among affordances, deindividuation, and the SoS process on social media platforms. The results contribute to a deeper understanding of the SoS process on social media and the importance of considering platform- and affordances-specific factors. It is true that expected social sanctions are significant determinants of opinion expression, but other factors may also be involved (Neubaum & Weeks, 2022; Rössler & Schulz, 2014). Hence, we conceptualize fear of social sanctions by taking into account the specific situational factors and communication contexts that may influence its impact. This allows for a more nuanced understanding of the role of perceived social sanctions in shaping opinion-expression behavior. Overall, this study provides valuable insights into the complex dynamics of self-expression on social media and the role of deindividuation in shaping opinion-expression behavior.

References

- Bennett, W. L., Segerberg, A., & Walker, S. W. (2014). Organization in the crowd: Peer production in large-scale networked protests. *Information, Communication & Society, 17*(2), 232–260. doi:10.1080/1369118x.2013.870379
- Bishop, J. (2013). The effect of de-individuation of the Internet troll on criminal procedure implementation: An interview with a hater. *International Journal of Cyber Criminology, 7*(1), 28–29. <https://www.cybercrimejournal.com/Bishop2013janijcc.pdf>
- Cattell, R. B. (1966). The screen test for the number of factors. *Multivariate Behavioral Research, 1*(2), 245–276. doi:10.1207/s15327906mbr0102_10
- Chan, M. D. (2018). Reluctance to talk about politics in face-to-face and Facebook settings: Examining the impact of fear of isolation, willingness to self-censor, and peer network characteristics. *Mass Communication and Society, 21*(1), 1–23. doi:10.1080/15205436.2017.1358819
- Chaudhry, I., & Gruzd, A. (2020). Expressing and challenging racist discourse on Facebook: How social media weaken the “spiral of silence” theory. *Policy & Internet, 12*(1), 88–108. doi:10.1002/poi3.197
- Chen, G. M. (2011). Tweet this: A uses and gratifications perspective on how active Twitter use gratifies a need to connect with others. *Computers in Human Behavior, 27*(2), 755–762. doi:10.1016/j.chb.2010.10.023
- Chen, H. (2018). Revisiting the privacy paradox on social media with an extended privacy calculus model: The effect of privacy concerns, privacy self-efficacy, and social capital on privacy management. *American Behavioral Scientist, 62*(10), 1392–1412. doi:10.1177/0002764218792691
- DeVito, M. J., Walker, A. E., & Birnholtz, J. (2018). Too gay for Facebook. *Proceedings of the ACM on Human-Computer Interaction, 2*(CSCW), 1–23. <https://doi.org/10.1145/3274313>
- Diener, E., & Wallbom, M. (1976). Effects of self-awareness on antinormative behavior. *Journal of Research in Personality, 10*(1), 107–111. doi:10.1016/0092-6566(76)90088-x
- Ellison, N. B., Blackwell, L., Lampe, C., & Triou, P. (2016). “The question exists, but you don’t exist with it”: Strategic anonymity in the social lives of adolescents. *Social Media+ Society, 2*(4). <https://doi.org/10.1177/2056305116670673>
- Evans, S., Pearce, K. E., Vitak, J., & Treem, J. W. (2017). Explicating affordances: A conceptual framework for understanding affordances in communication research. *Journal of Computer-Mediated Communication, 22*(1), 35–52. <https://doi.org/10.1111/jcc4.12180>

- Festinger, L., Pepitone, A., & Newcomb, T. (1952). Some consequences of deindividuation in a group. *Journal of Social Psychology, 47*, 382–389. doi:10.1037/h0057906
- Fox, J., & Holt, L. F. (2018). Fear of isolation and perceived affordances: The spiral of silence on social networking sites regarding police discrimination. *Mass Communication and Society, 21*(5), 533–554. doi:10.1080/15205436.2018.1442480
- Gearhart, S., & Zhang, W. (2015). "Was it something I said?" "No, it was something you posted!" A study of the spiral of silence theory in social media contexts. *Cyberpsychology, Behavior, and Social Networking, 18*(4), 208–213. doi:10.1089/cyber.2014.0443
- Giddings, F. H. (1897). The crowd. A study of the popular mind. By Gustave Le Bon. The Macmillan Co. *Science, 5*(123), 734–735. doi:10.1126/science.5.123.734
- Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology, 78*(6), 1360–1380. doi:10.1086/225469
- Halpern, D., & Gibbs, J. (2013). Social media as a catalyst for online deliberation? Exploring the affordances of Facebook and YouTube for political expression. *Computers in Human Behavior, 29*(3), 1159–1168. doi:10.1016/j.chb.2012.10.008
- Hanson, T. L., Drumheller, K., Mallard, J., McKee, C., & Schlegel, P. (2010). Cell phones, text messaging, and Facebook: Competing time demands of today's college students. *College Teaching, 59*(1), 23–30. doi:10.1080/87567555.2010.489078
- Hayes, A. F. (2013). *Mediation, moderation, and conditional process analysis. Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (1st ed.). New York, NY: Guilford Publications.
- Hayes, A. F., Matthes, J., & Eveland, W. P. (2013b). Stimulating the quasi-statistical organ. *Communication Research, 40*(4), 439–462. <https://doi.org/10.1177/0093650211428608>
- Himmelboim, I., McCreery, S., & Smith, M. A. (2013). Birds of a feather tweet together: Integrating network and content analyses to examine cross-ideology exposure on Twitter. *Journal of Computer-Mediated Communication, 18*(2), 40–60. doi:10.1111/jcc4.12001
- Hite, D. M., Voelker, T. A., & Robertson, A. (2014). Measuring perceived anonymity: The development of a context-independent instrument. *Journal of Methods and Measurement in the Social Sciences, 5*(1), 22–30. doi:10.2458/jmm.v5i1.18305
- Ho, S., & McLeod, D. M. (2008). Social-psychological influences on opinion expression in face-to-face and computer-mediated communication. *Communication Research, 35*(2), 190–207. <https://doi.org/10.1177/0093650207313159>

- Hogan, B. (2010). The presentation of self in the age of social media: Distinguishing performances and exhibitions online. *Bulletin of Science, Technology & Society*, 30(6), 377–386. doi:10.1177/0270467610385893
- Kim, J. H., & Park, H. C. (2011). The effect of uniform virtual appearance on conformity intention: Social identity model of deindividuation effects and optimal distinctiveness theory. *Computers in Human Behavior*, 27(3), 1223–1230. doi:10.1016/j.chb.2011.01.002
- Le Bon, G. (2007). *The crowd: A study of the popular mind*. New York, NY: BN Publishing.
- Lee, H., Oshita, T., Oh, H. J., & Hove, T. (2014). When do people speak out? Integrating the spiral of silence and the situational theory of problem-solving. *Journal of Public Relations Research*, 26(3), 185–199. doi:10.1080/1062726x.2013.864243
- Lowry, P. B., Zhang, J., Wang, C., & Siponen, M. T. (2016). Why do adults engage in cyberbullying on social media? An integration of online disinhibition and deindividuation effects with the social structure and social learning model. *Information Systems Research*, 27(4), 962–986. doi:10.1287/isre.2016.0671
- Luarn, P., & Hsieh, A.-Y. (2014). Speech or silence: The effect of user anonymity and member familiarity on the willingness to express opinions in virtual communities. *Online Information Review*, 38(7), 881–895. doi:10.1108/OIR-03-2014-0076
- Marder, B., Joinson, A., Shankar, A., & Thirlaway, K. (2016). Strength matters: Self-presentation to the strongest audience rather than lowest common denominator when faced with multiple audiences in social network sites. *Computers in Human Behavior*, 61, 56–62. doi:10.1016/j.chb.2016.03.005
- McCroskey, J. C., Beatty, M. J., Kearney, P. M., & Plax, T. G. (1985). The content validity of the PRCA-24 as a measure of communication apprehension across communication contexts. *Communication Quarterly*, 33(3), 165–173. doi:10.1080/01463378509369595
- McLeod, S. A. (2008). Social identity theory. *Simply Psychology*. Retrieved from <https://simplypsychology.org/social-identity-theory.html>
- Mosher, D. L. (1989). Threat to sexual freedom: Moralistic intolerance instills a spiral of silence. *Journal of Sex Research*, 26(4), 492–509. doi:10.1080/00224498909551530
- Neubaum, G., & Krämer, N. C. (2018). What do we fear? Expected sanctions for expressing minority opinions in offline and online communication. *Communication Research*, 45(2), 139–164. doi:10.1177/0093650215623837

- Neubaum, G., & Weeks, B. E. (2022). Computer-mediated political expression: A conceptual framework of technological affordances and individual tradeoffs. *Journal of Information Technology & Politics*, 20(1), 19–33. doi:10.1080/19331681.2022.2028694
- Neuwirth, K., Frederick, E. C., & Mayo, C. S. (2007). The spiral of silence and fear of isolation. *Journal of Communication*, 57(3), 450–468. doi:10.1111/j.1460-2466.2007.00352.x
- Noelle-Neumann, E. (1974). The spiral of silence: A theory of public opinion. *Journal of Communication*, 24(2), 43–51. doi:10.1111/j.1460-2466.1974.tb00367.x
- Ordoñez, M. a. M., & Nekmat, E. (2019). "Tipping point" in the SoS? Minority-supportive opinion climate proportion and perceived hostility in uncivil online discussion. *New Media & Society*, 21(11–12), 2483–2504. <https://doi.org/10.1177/1461444819851056>
- Oz, M., Zheng, P., & Chen, G. M. (2018). Twitter versus Facebook: Comparing incivility, impoliteness, and deliberative attributes. *New Media & Society*, 20(9), 3400–3419. doi:10.1177/1461444817749516
- Perrin, A. (2015). Social media usage: 2005–2015. Pew Research Center. Retrieved from <https://www.pewresearch.org/internet/2015/10/08/social-networking-usage-2005-2015/>
- Porten-Cheé, P., & Eilders, C. (2015). Spiral of silence online: How online communication affects opinion climate perception and opinion expression regarding the climate change debate. *Studies in Communication Sciences*, 15(1), 143–150. doi:10.1016/j.scoms.2015.03.002
- Postmes, T., & Spears, R. (1998). Deindividuation and antinormative behavior: A meta-analysis. *Psychological Bulletin*, 123(3), 238–259. doi:10.1037/0033-2909.123.3.238
- Postmes, T., Spears, R., Sakhel, K., & De Groot, D. (2001). Social influence in computer-mediated communication: The effects of anonymity on group behavior. *Personality and Social Psychology Bulletin*, 27(10), 1243–1254. doi:10.1177/01461672012710001
- Prentice-Dunn, S., & Rogers, R. (1982). Effects of public and private self-awareness on deindividuation and aggression. *Journal of Personality and Social Psychology*, 43(3), 503–513. doi:10.1037/0022-3514.43.3.503
- Priest, S. H. (2006). Public discourse and scientific controversy. *Science Communication*, 28(2), 195–215. doi:10.1177/1075547006293918
- Reicher, S. D., Spears, R., & Postmes, T. (1995). A social identity model of deindividuation phenomena. *European Review of Social Psychology*, 6(1), 161–198.

- Rössler, P., & Schulz, A. (2014). Public opinion expression in online environments. In W. Donsbach, C. T. Salmon, & Y. Tsfati (Eds.), *The spiral of silence new perspectives on communication and public opinion* (1st ed., vol. 117, pp. 117–134). New York, NY: Routledge. doi:10.4324/9780203125007
- Rousseau, R. F., Frison, E., & Eggermont, S. (2019). The reciprocal relations between Facebook relationship maintenance behaviors and adolescents' closeness to friends. *Journal of Adolescence*, 76(1), 173–184. <https://doi.org/10.1016/j.adolescence.2019.09.001>
- Rui, J. R., Cui, X. M., & Liu, Y. (2020). They are watching me: A self-presentational approach to political expression on Facebook. *Mass Communication and Society*, 23(6), 858–884. doi:10.1080/15205436.2020.1740741
- Salmon, C. T., & Neuwirth, K. (1990). Perceptions of opinion "climates" and willingness to discuss the issue of abortion. *Journalism Quarterly*, 67(3), 567–577. doi:10.1177/107769909006700312
- Shahin, S., Nakahara, J., & Sánchez, M. (2021). Black Lives Matter goes global: Connective action meets cultural hybridity in Brazil, India, and Japan. *New Media & Society*, 1(20), 2–20. doi:10.1177/146144
- Spears, R., & Lea, M. (1994). Panacea or panopticon? The hidden power in computer-mediated communication. *Communication Research*, 21(4), 427–459. <https://doi.org/10.1177/009365094021004001>
- Tajfel, H., Turner, J. C., Austin, W. G., & Worchel, S. (1979). An integrative theory of intergroup conflict. *Organizational Identity: A Reader*, 56(65), 12–14.
- Theocharis, Y., Barberá, P., Fazekas, Z., Popa, S. A., & Parnet, O. (2016). A bad workman blames his tweets: The consequences of citizens' uncivil Twitter use when interacting with party candidates. *Journal of Communication*, 66(6), 1007–1031. doi:10.1111/jcom.12259
- Turner, J. C. (1982). Towards a cognitive redefinition of the social group. In H. Tajfel (Ed.), *Social identity and intergroup relations* (pp. 15–40). Cambridge, UK: Cambridge University Press.
- Van Duyn, E. (2018). Hidden democracy: Political dissent in rural America. *Journal of Communication*, 68(5), 965–987. doi:10.1093/joc/jqy042
- Wellman, B., & Wortley, S. (1990). Different strokes from different folks: Community ties and social support. *American Journal of Sociology*, 96(3), 558–588. <https://doi.org/10.1086/229572>
- Wu, T., & Atkin, D. (2018). To comment or not to comment: Examining the influences of anonymity and social support on one's willingness to express in online news discussions. *New Media & Society*, 20(12), 4512–4532. doi:10.1177/1461444818776629

Yun, G. W., & Park, S. (2011). Selective posting: Willingness to post a message online. *Journal of Computer-Mediated Communication, 16*(2), 201–227. doi:10.1111/j.1083-6101.2010.01533.x

Zimbardo, P. G. (1969). The human choice: Individuation, reason, and order versus deindividuation, impulse, and chaos. *Nebraska Symposium on Motivation, 17*, 237–307. Retrieved from <http://defencemanagement.org/article/human-choice-individuation-reason-and-order-versus-deindividuation-impulse-and-chaos>