Social media as a catalyst for online deliberation? Exploring the affordances of Facebook and YouTube for political expression

Daniel Halpern a,⁎, Jennifer Gibbs b

a School of Communications, Pontificia Universidad Catolica de Chile, Alameda 340, Santiago, Chile
b School of Communication and Information (SC&I), Rutgers, The State University of New Jersey, 4 Huntington Street, New Brunswick, NJ 08901-1071, USA

A R T I C L E   I N F O

Article history:
Available online xxxx

Keywords:
Computer-mediated communication
Facebook
Online deliberation
SIDE theory
Social media
YouTube

A B S T R A C T

This manuscript aims to assess the potential of social media as a channel to foster democratic deliberation. It does this by examining whether the types of discussions that citizens maintain in two of the most used social media channels managed by the White House – Facebook and YouTube – meet the necessary conditions for deliberative democracy. For this purpose 7230 messages were analyzed and assessed in terms of indicators developed to evaluate online discourse derived from the work of Habermas. By contrasting social media channels that differ in the affordances of identifiability and networked information access (two traditional predictors of online deliberation), we seek to contribute a deeper understanding of social media and its impact on deliberation. Drawing on the social identification/deindividuation (SIDE) model of computer mediated communication and network theories, we predict that political discussions in Facebook will present a more egalitarian distribution of comments between discussants and higher level of politeness in their messages. Consistent with our theoretical framework, results confirm that Facebook expands the flow of information to other networks and enables more symmetrical conversations among users, whereas politeness is lower in the more anonymous and deindividuated YouTube.

© 2012 Elsevier Ltd. All rights reserved.

1. Introduction

New information and communication technologies (ICTs) have been seen as mechanisms for increasing collaborative communication between the government and the public, especially in the past decade as democratic systems have become increasingly decentralized, interdependent and linked by new information technologies (Chadwick, 2008). Internet advocates have traditionally claimed that the Web can potentially improve democratic practices by connecting citizens through virtual networks and communities of interest, allowing users to participate in collaborative platforms that facilitate increased information flow and diversity of opinion, and even make government decisions more expertly-informed and democratic (Noveck, 2009). In the last 10 years, user-generated content has become increasingly popular on the Web. More and more people today participate in content creation, rather than just consumption. The label “social media” has been attached to the growing number of Web 2.0 websites or services whose content is primarily user-driven, such as blogs, social network sites, micro-blogs (e.g. Twitter), and digital media sharing formats (Agichtein, Castillo, Donato, Gionis, & Mishne, 2008).

Further, the use of these applications by federal agencies has become a growth phenomenon in the United States. The State Department implemented a social network site that facilitates discussions about cultural exchange programs in the online virtual community known as Second Life, the Federal Emergency Management Agency now allows YouTube subscribers to comment on its disaster response, and the Army’s website even includes a virtual recruiter, confirming the increasing tendency of government agencies to rely on networked technologies to communicate and engage with the public (Norton & Citron, 2010). Indeed, several scholars have claimed that a new category for e-government, Citizen-to-Citizen (C2C), should be considered to incorporate the relationships between citizens that develop through the communication channels afforded by governments (Yildiz, 2007).

Little is known, however, about the role of increasingly popular social media sites such as Facebook and YouTube in promoting online political discussion. The goal of this manuscript is twofold. First, we explore which messages posted by the White House successfully initiate conversations among users and whether factors recognized by previous research on online deliberation such as group size, volume of communication, interactivity between participants and type and content of messages have the same impact on user participation in social network sites (SNSs). Second, we argue that SNSs possess different affordances (Gibson, 1986) that shape discussion networks and influence deliberation in different ways. We focus on two particular affordances – identifiability and networked information access, two traditional predictors of online deliberation – by comparing political discussion in two
social media channels that differ in these affordances, namely Facebook and YouTube.

Drawing on the social identification/deidentification effects (SIDEs) model (Reicher, Spears, & Postmes, 1995), we predict that the greater identifiability in Facebook will lead to greater politeness than the more anonymous YouTube. Drawing on social network theory, and based on the greater networked information access provided to Facebook users (in the form of automatic updates to users’ networks when content is generated), we predict that Facebook political discussions will be characterized by more egalitarian distribution of comments among discussants due to the greater information flow to social networks beyond those involved in the immediate discussion. In this way, we expect our findings to contribute to a deeper understanding of political deliberation in SNSs by analyzing several factors at the individual and conversational level that might affect users’ responsiveness in social media accounts managed by the White House, based on the following research questions: Do the factors recognized by previous research on online political discussion affect the quality of deliberation observed in social media? How do different social media affordances shape discussion networks and influence deliberation?

1.1. Defining deliberation

Traditionally, political discussion has been considered a key factor in societal consensus-building (Scheufele & Nisbet, 2002), since it increases tolerance, highlights opportunities for involvement and encourages engagement in public life (Walsh, 2004). Although there are many different ways to conceptualize deliberation, in the last few decades scholars from different research traditions have included in their definitions at least two common ideas: the concept of a genre or form of communication characterized by “the performance of a set of communicative behaviors that promote thorough group discussion” (Burkhalter, Gastil, & Kelshaw, 2002, p. 400), and the notion that in this process of communication the individuals involved weigh carefulliy the reasons for and against some of the propositions presented by others (Gastil, 2000; Schudson, 1997).

Habermas (1989), in one of the most referenced conceptualizations, defines deliberation as an interchange of rational–critical arguments among a group of individuals, triggered by a common or public problem, whose main focus or topic of discussion is to find a solution acceptable to all who have a stake in the issue. Additionally, scholars argue that the behavior of participants and interaction among them should meet the criteria established by the principles of political equality and egalitarian reciprocity in order to be considered within the range of deliberative discussion (Burkhalter et al., 2002; Fishkin, 1991). Consequently, for the purposes of this paper deliberation will be conceptualized as an idealized category within the broader notion of what Gastil, Chambers and other scholars call “discursive participation” (Delli Carpini, Cook, & Jacobs, 2004). This refers to a particular sort of discussion between at least two individuals in which (1) the form of communication emphasizes the use of logic and reasoning instead of power or coercion, (2) this reasoned engagement focuses on a social or political issue through which participants are able to identify solutions to a common problem, and (3) individuals are open to opinions and ideas expressed by others, and at the same time the communication between them is governed by rules of equality, symmetry and civility.

1.2. Deliberation and the Internet

Since the advent of the Internet, scholars have heralded its potential to democratize communication, and more recently research has highlighted the role of social media specifically in enhancing civic participation and democratic decision-making (e.g., Lerman, 2007; Macintosh, 2004). Jansen and Kies (2005) found that online spaces enabled decentralized communication of many-to-many since each participant is normally equally entitled to comment or raise a new question, and participants are free to express their opinions. Research has also found that the written and asynchronous characteristics of the medium may support more reflective, rational and argumentative conversations (Stromer-Galley & Wichowski, 2010). Others have recognized in these types of tools a more appropriate medium for deliberation than synchronous channels (Coleman & Gotze, 2001) because they provide users a tool to compose messages at their own pace, constituting a more favorable channel for a rational–critical form of debate (Dahlberg, 2001).

On the other hand, researchers have questioned whether the form of discourse fostered by computer-mediated discussions captures the benefits of the face-to-face ideal, rejecting the hypothesis that online deliberation expands the informal zone of the public sphere (Wilhelm, 1999). Several reasons have been presented by scholars to justify this stance. First, computer-mediated communication (CMC) has been historically regarded as an impersonal phenomenon that deindividuates participants, encouraging uncivil discourse (flaming) and group-based stereotyping (Kiesler, Siegel, & McGuire, 1984). Papacharissi (2004) identified the absence of cues as the main condition to encourage flaming and uncivil behavior in online political discourse. Similarly, Davis (1999) found that users who participate in online discussions about politics usually make comments only in groups that agree with their own views, concluding that online deliberation mainly reinforces preexisting views by perpetuating a confirmation bias. Consequently, since online participation has been both positively and negatively related to deliberation, there is a need to clarify the dynamics involved in the uses of specifically Web 2.0-based applications for deliberation purposes. This study takes a step in that direction through the analysis of two social media channels that differ in the level of identifiability and networked information access required for participation.

1.3. Identifiability and networked information access in online deliberation

The level of identifiability vs. anonymity is a media affordance likely to influence the nature of online deliberation. Based on the Social Identity Model of Deindividuation Effects (SIDEs), scholars argue that given the relative lack of social cues in CMC, individuals may find it easier to issue unpleasant decisions as they are divorced from the human consequences of their actions (Postmes, Spears, & Lea, 1998). “Deindividuation theory proposes that behavior becomes socially deregulated under conditions of anonymity and group immersion, as a result of reduced self-awareness” (Spears, Postmes, Lea, & Wolbert, 2002, p. 94). According to SIDE theory, under conditions in which participants’ individual identity is not salient, group norms and identity are triggered, and this in-group identity leads to stereotyping of out-group members. Similarly, in CMC contexts that allow for less exchange of social context cues, this has a depersonalizing effect that may lead to uninhibited behavior and flaming practices (Kiesler & Sproull, 1992). This suggests that anonymity and deindividuation may have a negative, divisive effect on online deliberation.

Another media affordance that is likely to influence the quality of online deliberation is the level of networked information access. Research has shown that individual-level variables alone are insufficient for explaining civic behaviors, and that interactions within and across different types of community settings can be important catalysts for deliberation and civic action (Scheufele, Nisbet, Brossard, & Nisbet, 2004). Studies for example have consistently found a positive relationship between the size of the network in which individuals discuss civic matters and participatory
behaviors (Huckfeldt, Mendez, & Osborn, 2004; McLeod et al., 1999; Moy & Gastil, 2006). Eveland and Hively (2009) explain that as one’s network size increases, the probability of interaction with sources of new information grows, since one is more likely to encounter a higher number of politically active individuals. Similarly, McLeod et al. (1999) argue that larger networks are more likely to stimulate discussion since people have more possibilities to find individuals with whom they share interests and feel comfortable interacting. Furthermore, Scheufele, Nisbet, Brossard, and Nisbet (2004) argue that when networks are expanded, participants are more likely to encounter opposing points of view. This exposure to disagreement is likely to produce greater cognitive activity (Levine & Russo, 1995) since it forces individuals to learn about alternative perspectives, which leads them to reflect more carefully on what they already know. This in turn increases their levels of self-efficacy and makes them less intimidated by speaking up, which may engender a more egalitarian relationship and increase overall participation levels.

1.4. Identifiability and networked information access in social network sites

SNSs are Web-based services that allow individuals to connect with others through a system profile. Different platforms are characterized by different affordances in terms of the level of identifiability and information and network access the SNSs allow users. Facebook and YouTube show an interesting contrast on these dimensions. On one hand, Facebook affords users a public space on their profiles, where contacts can leave messages, post links, and share videos or pictures openly, making this information public to all of the users’ contacts. Facebook users have been found to have more than 320 friends on average, and to maintain relatively open and recognizable profiles that include a variety of personal information such as photos, dating preferences, religion, interests, political affiliation, birthday, networks, and friends (Ellison, Steinfield, & Lampe, 2011). Although in theory users may create a fake profile, studies have shown that users’ profiles are not only comprised of data generated by them, but rather a combination of information provided by their contacts (comments and photos posted), and the system (number and types of friends); and since users have many contacts, these three sources provide a context that allows users to draw inferences about the real identity and personality of others (Utz, 2010). Further, Facebook users are automatically notified about content updates in their newsfeeds and have immediate access to information posted or “liked” by their contacts. When users for instance comment on news posted by the White House, the message becomes public not only to the users who are participating on the White House’s page, but also to their social networks, forming more “open” communities but through bounded contacts, since Facebook users are informed based on their network’s activities. As Hampton, Lee and Her (2011) suggest, Facebook affords opportunities for “pervasive awareness” whereby individuals regularly broadcast and receive information from their networks.

In contrast, participation on YouTube, a user-generated online video platform through which individuals can upload, download or share videos, and provide comments on videos, is much more anonymous. YouTube users are not required to disclose personal data to log in, and users are not notified about their network’s activities. This social media channel allows video posters and viewers to communicate through textual and video commentaries as well as video rating systems. The videos can be accessed by anyone and although users can share content with their contacts and, like in Facebook, their networks are visible to other users, the main difference is that users can become subscribers or can even manage a channel without giving personal information to the system. In an ethnographic study of YouTube users, Lange (2008) concluded that a considerable number of users exhibited “privately public” behavior, which involved sharing widely accessible content with many viewers but limiting access to detailed information about the video producers’ identities. More importantly, this platform does not inform users’ networks about their activities, and consequently when individuals for instance comment on a video under the White House’s account, their contacts are not automatically notified about this activity.

Based on this logic, we advance a number of hypotheses about the distinctive implications of the media affordance of identifiability/anonymity for deliberation. First, since YouTube users have a more anonymous profile than Facebook users, it could be expected that they will be less influenced by politeness norms than more identifiable Facebook users, and they may find it easier to flame others since they have reduced accountability for their opinions. Users’ media perceptions and experiences are strongly influenced by the degree to which one is familiar with other participants (Carlson & Zmud, 1999), and this is likely to be higher in Facebook than YouTube. Additionally, according to the SIDE model, anonymous participants may also develop a strong in-group identity, causing them to stereotype and dismiss opinions of out-group members (Postmes, Spears, & Lea, 2002). Consequently, we believe that in more anonymous conditions, social categorization processes will be stronger as discussants will be more likely to assign stereotypes to others without recognizing their value as individuals, which will result in less politeness and civility in terms of tolerance for individuality. Thus we propose:

H1a. Posts in the more anonymous social media channel (YouTube) will be less polite than posts in Facebook, the more identifiable social media channel.

H1b. Posts in YouTube will be less civil than posts in Facebook threads.

Following the previous hypotheses, since more impolite and uncivil messages are expected on more the more anonymous YouTube than the more identifiable Facebook, it could be argued that this greater anonymity and depersonalization might also negatively affect the level of argumentation used by participants to justify their claims, since instead of reasoned or respectful argument and debate with other users, discussants may instead attack others opinions:

H1c. Posts in YouTube will show more unfounded arguments and unsupported claims than posts in Facebook threads.

On the other hand, since Facebook users are automatically notified in their newsfeeds when their contacts generate content, and in contrast to YouTube, this information is not constrained to the “wall” offered by the organization, we expect that this network structure in Facebook will expand the flow of information and extend the discussions to other groups of users. This higher inclusion, in turn, will generate more symmetrical participation among users in Facebook than in YouTube, and discussions are likely to be characterized by a more egalitarian distribution of comments between discussants. Thus we propose:

H1d. Threads in Facebook will have a more egalitarian distribution of posts than YouTube threads.

1.5. Type of messages and conversational coherence as predictors of users’ interaction

Beyond media affordances, the topic of debate is also likely to have an important influence on deliberative outcomes. Warren (2006) explains that sensitive issues often provoke references to
status inequalities of speakers in ways that destabilize deliberation. The “who of the speakers undermines the what of statements, such that the speech loses its forcefulness as a means of resolving conflicts” (p. 163). Davis (1999) for instance found more personal attacks in political discussion spaces with extreme ideologies. Consequently, we predict that discussions of highly sensitive issues such as the Iraq War or gay marriage should be less likely to promote deliberation, and regardless of the medium, we expect to find less polite, civil, and deliberative arguments on more sensitive topics:

**H2a.** Posts in threads guided by more sensitive topics will be less polite than those in non-sensitive topic threads.

**H2b.** Posts in threads guided by more sensitive topics will be less civil than those in non-sensitive topic threads.

**H2c.** Posts in threads guided by more sensitive topics will be less deliberative than those in non-sensitive topic threads.

Similarly, the rhetorical form in which a person frames a contribution is likely to influence how others in the community respond to it. Galegher, Sproull, and Kiesler (1998) found that questions and personal histories emphasizing legitimacy were often included in initial posts by newcomers seeking to interact with online support groups. Similarly, previous research suggests that conversational coherence is a reliable indicator of civic participation, in the same way that longer messages are assumed to contain more complex sentences and ideas (Wilhelm, 1999). These two characteristics in messages also indicate cooperation among participants and reflection on one's responses, two necessary conditions of civil discussion and deliberation (Benson, 1996).

Research related to participatory communication in computer-mediated groups offers an applicable framework to study how conversational coherence affects interaction among participants. Rafaeli and Sudweeks (1997) distinguish the role that interactivity plays in the social dynamics of mediated groups, arguing that the interaction attained is what keeps message threads and their authors together. The authors argue that higher levels of interactivity in online communities can increase the engagement of users, leading to more sociability among them. Wise, Hamman, and Thorson (2006) found that communities featuring interactive comments related back to earlier messages in discussions elicited greater intent to participate in users than communities featuring non-interactive messages. Based on the finding that higher levels of interactivity in online communities increase user engagement, we propose that more interactive threads will be more deliberative and will contain longer messages. Furthermore, since in more identifiable media such as Facebook, participants can use the increased personal information available (e.g., political interests or partisanship) to expand the discussion or develop new arguments based on those details, we also expect that Facebook users will engage more in discussions than YouTube users. Thus, we propose:

**H3a.** Posts related to the original post or to other users’ posts will be more deliberative than posts unrelated to previous posts or to the original post.

**H3b.** Posts related to the original post or to other users’ posts will be longer than posts unrelated to previous posts or the original post.

**H3c.** Posts related to other users’ posts will be longer in Facebook than in YouTube.

Likewise, when ongoing communication exchanges occur, these exchanges carry a social, binding force (Rafaeli & Sudweeks, 1997) that might be expected to serve as a catalyst for extensive conversations, facilitating political discussion among users. In other words, users who engage in interaction with other users are likely to participate more extensively in discussions than users who merely respond to the initial posts. Therefore, it is predicted that:

**H4.** Users who make comments addressing other users will participate more frequently than users who make comments addressing the initial post.

### 2. Methods

#### 2.1. Sample

In order to test these hypotheses, we collected data from the Facebook and YouTube accounts managed by the White House. We chose the White House for three main reasons: (1) compared to other federal agencies it receives the highest number of comments by users per thread in both social media channels, (2) the topics posted in Facebook and YouTube cover almost the same information and differ only in format, and (3) the White House does not interfere in and/or moderate the discussions generated by users as other agencies do, which means that users can interact among themselves without being “guided” by the agency. A sample of 32 threaded conversations (each consisting of an original post and individual comments responding to it) was selected between June 15th and July 15th, 2010. This particular timeframe was selected because it was difficult for the researchers to retrieve all the messages posted by users older than 1 month from the White House. In order to represent this period, analysis of threads was begun on June 15th and then every other day, until July 15th. Given the fact that on June 27th the White House did not initiate any threads, 16 threads per channel were analyzed. Similarly, since the White House usually posts a “photo/video of the day” as its first message, we decided to analyze posts in a progressive sequence in order to minimize bias. In this way, we started on June 15th with the first post of the day, then the second post of June 17th, then the third of June 19th, and so forth, until July 15th. When the agency posted only one message, we selected that one. Finally, since the range of posts commented on by users in each thread varied between 157 and 1207, if the thread selected had more than 500 comments, a random sample of 500 was used to avoid overestimations and maintain a uniform number of comments in each channel (3900 posts in YouTube and 3930 in Facebook). For the purpose of this study, a thread is understood as groups of comments posted by users replying to a message or video posted by the White House. Overall, a total of 7230 messages from 32 conversation threads were analyzed: 3500 messages posted in 16 Facebook threads and 3730 messages posted in 16 YouTube threads.

#### 2.2. Procedure

The posts were coded by two independent coders, and the coding procedure followed the main steps described by Krippendorff (2004). After reviewing the variables and their operationalization, a coding instrument was created. To ensure inter-coder reliability and to test the consistency of the categorization scheme, an analysis using Cohen's Kappa was performed for validation purposes, which found acceptable reliability levels for each variable (specific kappas are reported below). Out of 7830 total comments, 790 messages were randomly drawn and analyzed by the coders.
2.3. Measurement

Two main types of independent variables were assessed: the original post of the thread and social media platform (Facebook vs. YouTube). The dependent variable was deliberation, measured in terms of three different dimensions and six specific items detailed below.

2.3.1. Type of posts

One dichotomous category was developed to assess whether the types of posts presented by the White House included highly sensitive issues able to generate debate and emotional opinions, such as gay marriage and the Iraq War (Kappa = 0.88).

2.3.2. Social media platform

This was defined as either Facebook or YouTube.

2.3.3. Deliberation

Based on the definition previously elaborated, the dependent variable, deliberation, was operationalized by assessing the presence of the following six variables. First, following Davis (1999) variable, deliberation was operationalized by assessing the use of logic and reasoning to justify a claim to measure the type of argumentation. The second variable, conversational coherence, considered the coherence regarding the topic individuals were discussing and whether posts were related to the initial message presented by the White House. The third variable, equality of participation, assessed whether the interaction among participants met criteria established by the principles of egalitarian reciprocity, considering rules of symmetry. The fourth and fifth variables considered degree of civility and politeness employed by participants, and the sixth variable was message length, which assumes that longer messages are used for more complex sentences and ideas. These variables are described below.

2.3.4. Justification/type of argumentation

This variable (Kappa = 0.64) considers the use of logic and reasoning by individuals. Based on Dahlberg (2001), it was classified into three subcategories: (1) unfounded claims without any kind of validation (e.g. Health care reform is bad – impeach Obama), (2) unsupported claims related to the original post or other user comments but showing a lack of reasoning to support the argument (e.g. Don’t criticize Obama’s policies, he has been the first president to hear what people need), and (3) arguments based on external sources such as quotes, data or websites. These three categories comprised the vast majority of posts.

2.3.5. Conversational coherence

This variable (Kappa = 0.88) has been traditionally measured in terms of messages related to the original topic, and messages that are ‘off-topic’ (Janssen & Kies, 2005). A third category was added to assess interaction among participants, which included messages related to comments posted by others. Consequently, (1) posts that added information to the discussion generated by the initial post were considered messages related to the thread (e.g. I agree with the new proposal and I also believe Government should implement it); (2) replies to previous comments posted by participants were considered user-to-user messages (e.g. @ Bruce, I’ve been out since Aug of 08 after working all my life 2 jobs at times); and (3) off-topic messages, which were comments neither related to the initial post nor to previous comments among users (e.g. If you are interested to know more about the government visit this website).

2.3.6. Equality of participation

To measure equality of participation and evaluate whether a few discusssants dominate the online conversations, we distinguished between users who posted only one comment and users who posted two or more messages.

2.3.7. Politeness

This variable (Kappa = 0.72) identified impolite behaviors that negatively affected agreement seeking between the parties. Impolite comments were regarded as derogatory messages, and included in this category were curses, insults, or words that indicated pejorative speak (e.g. Rosemary, why don’t you go burn a cross or something?). Consequently, posts were coded as either polite or impolite.

2.3.8. Civility

This variable (Kappa = 0.70) assessed whether participants promoted respect for individuals as members of groups, political associations or any other collectivity. Since tolerance for individuality has been recognized as a signal of strong democracy according to many theorists (Carter, 1998; Schmidt, 1998), and according to the SIDE model in online environments participants develop strong in-group identity, causing them to stereotype and dismiss opinions of out-group members, we differentiated civility and politeness as two separate constructs. Uncivil messages were considered posts in which the discussant assigned stereotypes to others and put them in a particular group without recognizing their value as individuals. However, we drew a distinction between messages that associated individuals with a group using mild or neutral labels, such as “All of you Obummer lovers are probably people that want a ONE WORLD GOVERNMENT… This nation is screwed!”, and messages discussing ethnic or other social groups in derogatory terms (e.g. “robin carnahan is a pelosi style leftist-LOONEY! She’s been a PLAGUE to the people of Missouri !!!”). Consequently, the civility variable distinguished between (1) absent, (2) neutral, and (3) antagonistic stereotypes.

2.3.9. Message length

Longer messages were assumed to represent more complex sentences and ideas. This variable was measured in terms of the number of characters in the post. Fig. 1 summarizes the variables considered to measure deliberation.

3. Results

In terms of the effects of media affordances on democratic indicators, threads varied significantly as detailed in Table 2. Regarding

![Diagram](http://dx.doi.org/10.1016/j.chb.2012.10.008)
politeness, 32.7% of the messages were coded as impolite in YouTube, whereas in Facebook only 23% were coded as impolite. A Pearson Chi-Square test revealed statistically significant results ($X^2(df = 1) = 35.240, p < 0.01$), supporting H1a as YouTube messages were more impolite than Facebook messages. Regarding H1b, the presence of uncivil messages, no significant difference was found between social media channels. We also found the social media channel affected how users justified their arguments, although H1c received mixed support. On one hand, 64.9% of posts in Facebook employed unfounded arguments or claims without any kind of validation, whereas 71.1% of YouTube posts were not justified. On the other hand, 10.5% of the posts in YouTube showed supported arguments quoting external sources or data, while only 5.3% of Facebook posts drew on external sources ($X^2(df = 2) = 63.51, p < 0.01$). Finally, the results demonstrated a significant difference between users who posted only one message per thread and those who contributed two or more posts: whereas 40.1% of the messages in YouTube threads were posted by single-message posters, 67.3% of the messages in Facebook threads were by participants who posted once ($X^2(df = 2) = 216.2, p < 0.01$). This means that in YouTube most of the messages were posted by individuals who commented multiple times, while in Facebook the majority of posts were by single-message posters, demonstrating more egalitarian participation between discussants in Facebook and supporting H1d.

In testing the influence of the topic on democratic indicators, results supported H2a. As Table 3 shows, highly sensitive threads triggered more impolite posts among users than non-sensitive posts: 45% of the messages posted in threads with highly sensitive topics were impolite, whereas in more neutral posts only 26.9% of posts were impolite ($X^2(df = 1) = 68.93, p < 0.01$). However, no significant difference was found in the degree of civility of messages; H2b was thus not supported. Regarding H2c, the effect was in the opposite direction of that predicted: in threads with highly sensitive initial posts, users actually presented more arguments to support their claims (30.2% vs. 23.3%), cited more external sources to justify their arguments (16.9% vs. 7.4%), and provided fewer unfounded claims than in threads initiated by more neutral posts (52.9% vs. 69.3%). This effect is significant ($X^2(df = 1) = 63.51, p < 0.01$).

In terms of the role that conversational coherence plays in the exchange of rational–critical arguments, results supported H3a. Users who posted messages unrelated to the topic of debate justified their arguments significantly less than those posting topic-related messages or user-to-user messages. Table 4 shows that in 53.6% of the messages related to the topic and in 63.2% of messages addressed to other users, claims were not justified, whereas in 71.3% of the off-topic messages, claims were not supported. Similarly, more than 10% of topic-related messages addressed to other users used external sources and data, whereas only 7% of off-topic messages presented external support ($X^2(df = 2) = 63.51, p < 0.01$). To test whether conversational coherence had an impact on length of posts (H3b), a one-way analysis of variance (ANOVA) was performed. The results from this analysis, detailed in Table 4, indicated that coherence had a significant effect on length of posts ($F(2,7768) = 6.53, p < .001$). The mean values for the three categories indicate that the more coherence there is between posts and topic, the longer the posts (topic-related posts: $M = 259.86$; user-to-user: $M = 221.59$; off-topic posts: $M = 189.94$). This provides support for H3b.

To determine if the interaction between coherence of messages and social media channel had an impact on the length of messages, as proposed by H3c, a factorial univariate ANOVA was conducted. Table 4 shows that the main effect of social media platform was not significant, but the main effect of conversational coherence was significant ($F(2,7070) = 40.54, p < .001$) and, interestingly, the interaction between these two variables was also significant ($F(2,7070) = 31.38, p < .001$). From Fig. 2, it can be observed that YouTube users who posted off-topic messages wrote longer posts than Facebook users, but at the same time, participants who posted user-to-user messages invested more time in Facebook than YouTube, providing support for H3c.

Finally, H4 predicted that participants who posted more user-to-user messages would participate more frequently than users who made comments addressing the initial post or off-topic comments. H4 was confirmed and results suggest that most of the users who posted multiple times addressed these posts to other users (68.2% vs. 22.8%). On the other hand, most of the users who posted only one message (71.1%) wrote off-topic messages ($X^2(df = 1) = 810.51, p < 0.01$), as Table 5 shows.

4. Discussion

This study aimed to contribute a deeper understanding of political deliberation in SNS by analyzing several factors related to media affordances and message characteristics that might affect the quality of deliberation in social media accounts managed by the White House. For this purpose 7230 messages were analyzed and assessed by democratic indicators developed to evaluate online discourse derived from the work of Habermas. Overall the study yielded five major findings. First, regarding the effects of media affordances on democratic indicators, our study found that messages in the more anonymous YouTube were more impolite than messages in the more identifiable Facebook medium, showing support for SIDE theory. The results also showed that in Facebook

### Table 1

Table summarizing the hypotheses supported.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Supported</th>
<th>Rejected</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>1B</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>1C</td>
<td>✓ (partially)</td>
<td></td>
</tr>
<tr>
<td>1D</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>2A</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>2B</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>2C</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>3A</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>3B</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>3C</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

### Table 2

Impact of social media channel on politeness, level of argumentation and equality of participation.

<table>
<thead>
<tr>
<th>Social media channel</th>
<th>Politeness (%)</th>
<th>Level of argumentation (%)</th>
<th>Equality of participation (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Polite</td>
<td>Impolite</td>
<td>No claim post</td>
</tr>
<tr>
<td>YouTube</td>
<td>67.3*</td>
<td>32.7</td>
<td>64.9</td>
</tr>
<tr>
<td>Facebook</td>
<td>77*</td>
<td>23</td>
<td>71.1*</td>
</tr>
<tr>
<td>Total</td>
<td>70.5</td>
<td>29.5</td>
<td>67</td>
</tr>
</tbody>
</table>

* Indicates statistical significance at $p < 0.05$ or better.

Please cite this article in press as: Halpern, D., & Gibbs, J. Social media as a catalyst for online deliberation? Exploring the affordances of Facebook and YouTube for political expression. *Computers in Human Behavior* (2012). [http://dx.doi.org/10.1016/j.chb.2012.10.008](http://dx.doi.org/10.1016/j.chb.2012.10.008)
most of the messages were posted by individuals who commented only once, showing a more egalitarian participation due to the greater level of information access to users’ broader social networks. Second, our study demonstrated that highly sensitive threads triggered more impolite posts among users in both social media channels, but that such users also presented more arguments to support their claims than in non-sensitive posts. Third, results showed that conversational coherence plays a significant role in the exchange of rational–critical arguments, length and frequency of messages: users who posted messages related to the topic of debate provided more justification for their arguments, participated more frequently in conversations and posted longer messages. The Table 1 below summarizes the hypotheses supported.

Fourth, we found that user-to-user messages were longer in Facebook than in YouTube, which may be associated with the higher level of identifiability and networked information access afforded by Facebook: discussants in this SNS can use the information revealed in their profiles (e.g. political interests, organizational affiliations or partisanship) to expand their discussions based on that information or to develop arguments consistent with the

Table 3
Impact of thread topic on politeness and level of argumentation.

<table>
<thead>
<tr>
<th>Type of threads</th>
<th>Politeness (%)</th>
<th>Level of argumentation (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Polite</td>
<td>Impolite</td>
</tr>
<tr>
<td>High sensitive</td>
<td>73.1*</td>
<td>26.9</td>
</tr>
<tr>
<td>No sensitive</td>
<td>54.9*</td>
<td>45.1</td>
</tr>
<tr>
<td>Total</td>
<td>61.5</td>
<td>39.5</td>
</tr>
</tbody>
</table>

* Indicates statistical significance at p < 0.05 or better.

Table 4
Impact of conversational coherence on level of argumentation and post length.

<table>
<thead>
<tr>
<th>Type of posts</th>
<th>Level of argumentation (%)</th>
<th>Message length</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No claim post</td>
<td>Allegation</td>
</tr>
<tr>
<td>Topic related</td>
<td>53.6*</td>
<td>36.4*</td>
</tr>
<tr>
<td>User-to-user</td>
<td>63.2*</td>
<td>26.2*</td>
</tr>
<tr>
<td>Off-topic</td>
<td>71.3*</td>
<td>21.7*</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>24.3</td>
</tr>
</tbody>
</table>

* Indicates statistical significance at p < 0.05 or better.
profiles. Additionally, since users in Facebook are exposed to content posted by their contacts, they may engage more with their friends’ comments since they know them and they have a previous relationship. This in turn, may create a catalytic reaction by facilitating political discussion among groups of friends or at least people who know others’ friends, triggering more common topics and expanding the debate. Finally, previous research has theorized that highly sensitive issues are less likely to promote deliberative discussion than non-sensitive issues, but counterintuitively, the inverse effect was found: in threads initiated by highly sensitive posts, users presented more arguments, cited more external sources and provided fewer unfounded claims than in threads initiated by neutral posts. This contradiction might be explained by the fact that users were probably more invested in sensitive topics and more motivated to prove their point, so they drew on a variety of rhetorical resources to justify their arguments and probe their ideas.

4.1. Theoretical implications

Overall, it is important to note that most of the messages found in both social media channels were polite (72%) and the majority of discussants did not stereotype others (only 32% were considered uncivil), which differs considerably from previous research on online deliberation, which has found levels of flaming around 75% (Davis, 1999; Dutton, 1996; Wilhelm, 1999). The two social media affordances we have examined here of identifiability and networked information access (not as present in the earlier technologies studied) may explain this difference. First, compared to other online communities or Internet-based groups such as Usenet or more anonymous message boards, social media provide more identifiability as users reveal a great deal of personal information in their profiles such as type and number of contacts, pictures, previous posts, interests, and education. This adds greater accountability in their interactions with others, as it is more difficult for users to divorce themselves from the social consequences of their actions than it is in other online contexts. Discussants thus face social pressures to be more polite and less aggressive in posting comments. Second, social media provide greater information access to users’ social networks by making information exchanges among participants public through notifications and newsfeed updates. This means that when a user posts a message on a federal-agency Facebook account such as the White House, the message becomes public not only to all the users on that site, but also to the user’s broader social network. Consequently, this increases information flow among different audiences such as the user’s friends, coworkers, acquaintances and relatives who have access to the information posted by subjects who participate in political discussions, which may result in the involvement of more diverse viewpoints and more egalitarian political debates.

Interestingly, these two affordances are much more embedded in Facebook than in YouTube, and as the results show, these characteristics have important implications for deliberation. Indeed, consistent with our theoretical framework, we confirmed that by notifying users’ networks about their activities and expanding the flow of information to other users outside the initial site of debate (in this case the White House page wall) Facebook enabled more symmetrical conversations between users than YouTube. We also found that politeness was lower in the more anonymous YouTube. However, although users may be more polite in addressing others and participate more symmetrically in Facebook, they do not seem to elaborate very complex arguments to deliberate in social media. Our analysis showed that only 8% of the messages analyzed were arguments based on external sources such as quotes, data or websites, which may imply that although discussants are not using social media to “attack” other citizens, most of them are not debating rationally or deeply in this media. This suggests that political exchanges in social media may be more superficial in nature, rather than being characterized by in-depth debate or deliberation, and calls into question their efficacy. In fact, our analysis showed that most posters did not carefully weigh the reasons for or against the propositions presented by others; they only stated their beliefs, without justifying them.

Our findings have implications for SIDE theory. The results of this study indicate that in deliberative/participative contexts, citizens use more impolite and derogatory messages on the more anonymous YouTube platform than on Facebook. This finding fits within this framework, since given the relative lack of social cues in CMC, individuals may find it easier to issue unpleasant decisions as behavior becomes socially deregulated under conditions of anonymity and group immersion, as a result of reduced self-awareness. Given the fact that YouTube does not require users to elaborate rich profiles or identify themselves with personal information, it can be argued that when users participate on this platform they do not know exactly with whom they are interacting. Unlike Facebook’s “wall postings”, comments on YouTube are not associated with photos or visual icons depicting their contributors, but rather preceded by contributors’ pseudonyms that are not related to their offline, individualizing identity (Walther, DeAndrea, Kim, & Anthony, 2010). Therefore, since the absence of social cues leads people to feel more distant and anonymous from others and to be perceived in a deindividuated manner, it is likely that social and normative influences may be undermined, causing behavior to become deregulated and anti-social (Postmes & Spears, 1998). Although this effect was tempered even in the more anonymous YouTube channel, we did observe that YouTube posts were subject to lower politeness norms, presumably due to the more anonymous affordances of this medium.

On the other hand, SIDE theory posits that deindividuated participants often develop a strong group identity and norms, and that this in-group identity leads to stereotyping of out-group members, an element that in mediated deliberative contexts affects civility negatively since it shows a lack of respect for out-group members and intolerance for individuality (Carter, 1998). However, we failed to observe a higher use of stereotypes to refer to other users in YouTube. A plausible explanation might be related to the operationalization used to measure the in- and out-group differentiation and not to the application of the theory. In fact, the original Social Identity Theory (Tajfel, 1978) holds that depersonalized communication changes interactions from defining the situation in interpersonal terms (“me” and “you”) to defining it in intergroup terms (“us” vs. “them”). Thus, although we did not find differences in the degree to which participants used stereotypes to refer to others, it is possible that depersonalized interactions may stimulate the natural tendency for differentiation but only using pronouns (“us” vs. “them”) and not through stereotyping, which is consistent with SIDE theory as well. Sherblom (1990) for example found that employees who used significantly more pronouns under categories “we” and “they” indicated a greater involvement with the organization, whereas Monge and Miller (1988) concluded that personal pronouns associated with feelings of involvement were also linked to greater organizational commitment. Consequently, further analysis that distinguishes between valence of messages associated with pronouns under categories such as “we” and “I” or “you” and “they” might be useful in testing whether SIDE theory is valid in deliberative contexts as well.

4.2. Practical implications

The findings suggest that although social media may not provide a forum for intensive or in-depth policy debate, it nevertheless provides a deliberative space to discuss and encourage political
participation, both directly and indirectly. Further, our findings suggest that some social media channels may be better suited for deliberation than others, particularly those that allow for greater affordances of identifiability and networked information access. Our findings expose the positive role that social networks and greater access to personal information can play in fueling deliberation and modeling symmetrical participation. First, providing more personalization or identification of site members may ensure higher levels of politeness in online discussions, with participants interacting longer than in more anonymous channels. Second, our findings suggest that when users are automatically notified about content generated in their networks, more people contribute and this the debate is not dominated by specific individuals. One possible “participatory” ramifications of this extension to other networks is related to the fact that although users might not be interested in consuming political information directly from the White House, for instance, they may nevertheless be exposed to political discussions by friends’ political activity, and they may also be tempted to reply to comments posted by their friends, participating indirectly in threads initiated by a federal agency but “mediated” by their contacts.

4.3. Limitations and directions for future research

This study has several limitations that deserve mention. In analyzing only Facebook and YouTube accounts managed by the White House, this study examines deliberative discourse that transpires under the umbrella of one federal agency. This restriction thus precludes generalizations about the overall communication and deliberative patterns of users in other social media channels and/or social media accounts managed by different federal agencies. Further, it is difficult to know whether posters were individual citizens or people hired by political action organizations to influence public opinion. Additionally, for technical reasons only messages posted during a 1-month period were analyzed, suggesting that conclusions are based on limited information. Finally, some of the measures may have been limited in their measurement: we were unable to assess the veracity of the external sources used to justify arguments (just whether they were used or not) and we recognize that distinguishing between users with single vs. multiple posts was not as strong as measuring average posts per user. Nevertheless, our findings are valuable in the sense that they provide substantive insight into how the White House utilizes two social media channels and how users interact in these forums, and they suggest the importance of particular media affordances as well as message characteristics that may generalize to other tools as well.

There are broad opportunities for future research regarding the use of social media as a channel to facilitate participation in politics, fostering democratic deliberation and new spheres for political expression. Our results showed, for example, that highly sensitive posts triggered more impolite messages among users than non-sensitive posts, but that they also tended to be more supported with evidence and facts. Future research should investigate how threads initiated by other types of posts might influence not only quality but also the quantity of comments elicited by users, by analyzing for instance threads initiated by posts requesting feedback into the federal agency’s decision-making process (two-way messages) vs. posts oriented to promote events, inform about activities, or invite enthusiasts to participate (one-way messages). Also, the dynamic among users may be influential in determining other aspects related to participation and deliberation. Future studies might explore whether there is a difference between threads in which the first few posts are negative (as opposed to positive), impolite (as opposed to polite), or address other users (as opposed to the initial post). In addition, potential studies should consider the use of other quantitative approaches to assess the effect of other important variables on deliberation, such as rate and time of response and political partisanship.

This research makes an important contribution to our knowledge of online deliberation and suggests that social media such as Facebook and YouTube are not used purely for entertainment or interpersonal purposes, but for political discussion as well, and that users may benefit directly or indirectly from such participation. Our results suggest that social media has some democratic potential to integrate diverse sectors of the population, especially tools with greater affordances of identifiability and networked information access such as Facebook, and we identify particular communicative features that affect the quality of argumentation that ensues. As social media tools become increasingly incorporated into our daily lives, it is important to further explore the ways in which they can be used as tools for political participation and the effects this has on the political process and social discourse more broadly.

References


