Computer-Mediated Political Expression: A Conceptual Framework of Technological**Affordances and Individual Tradeoffs**

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Abstract

Digital media provide individuals platforms to express political views. Despite the significant scholarly attention to how and why political expression occurs through technologies and to what effect, research remains fragmented in its theoretical frameworks. The present work synthesizes research on computer-mediated communication and political communication to offer a framework that describes theoretically (a) which technological affordances lead (b) to which psychological processes with (c) which politically relevant actions. We address these questions in the context of four different technological affordances. In doing so, we emphasize the psychological cost-benefit calculations that occur when deciding whether to engage in political expression online.

Keywords: Political expression, technological affordances, metaconstructs, social media

Computer-Mediated Political Expression: A Conceptual Framework of Technological Affordances and Individual Tradeoffs

With the increasing prominence of social media technologies in political communication, research has examined a series of questions about these platforms' influence in politics: Do social media encourage users to become politically outspoken? Do all technologies facilitate users' political expression in the same way? What is the political impact of users' socially mediated political participation? All of these questions have been met with conflicting empirical evidence. Some studies reveal that social media promote political and civic engagement, including for people who may otherwise not participate offline (Boulianne, 2015). Other work documents users' rather low willingness to express political opinions online, emphasizing that only a minority of individuals use these technologies for participation (Vraga et al., 2015) and, when they do so, levels of engagement vary considerably from platform to platform (Halpern & Gibbs, 2013). Moreover, there is a debate about the ultimate social impact of these technologies, with optimistic views stating that social media can spur social movements and collective actions resulting in political change (Jost et al., 2018), while pessimistic views contend that low-threshold forms of participation online are a minimally effective form of engagement (Kwak et al., 2018).

In the face of this mixed state of knowledge, the antecedents and consequences of political expression in social media remain not well understood. In this article, we argue the scattered state of the literature stems in part from a lack of coherence in the theoretical approach scholars take to study social media and political expression. There is clearly a need for more theoretical grounding to the quantitative study of social media and politics and we believe a more nuanced understanding could be reached by systematically addressing the question of *when*

individuals engage politically in social media. Such an approach requires not only unraveling psychological processes that accompany political expression but also focusing on the particularities of the technological context in which this engagement occurs. We argue a much-needed synthesis of these two perspectives—the technical and the psychological—will advance theory in this area.

From a technological point of view, the notion of affordances represents cross-situational concepts that characterize contemporary communication platforms without being platform agnostic (Ellison & Vitak, 2015; Evans, Pearce, Vitak, & Treem, 2017). Research in the field of computer-mediated communication (CMC) has examined how affordances provided by technologies such as visibility or message persistence initiate, modify, or impede users' communication behavior. Still, relatively few studies of political media effects have systematically dealt with the question of which particular affordances of contemporary technologies enhance or inhibit political expression, and whether politically relevant behavior is modified by these characteristics (e.g., Eveland, 2003; Literat & Kligler-Vilenchik, 2019). Even fewer works attempt to understand how those technologies interact with individuals' psychological characteristics to affect political expression. Yet, the question of how technology and psychology simultaneously impact political expression is of critical importance since its answers will contribute to (a) knowledge about whether and to what extent social technologies serve as a functional space that provides citizens a venue for political engagement, (b) theory-based understandings of the unique effects of social media in diffusing politically relevant communication, and (c) the practical implications of how to design communication technologies that maximize the benefits and reduce potential costs of political engagement through these social platforms.

In light of these considerations, the present work consolidates research on computer-mediated communication and political communication to offer a formalized framework that outlines on a theoretical level (a) which technological affordances lead (b) to which psychological processes with (c) which politically relevant actions. The main argument undergirding this work is that characteristics of communication technologies affect users' perceived psychological benefits and costs of becoming politically outspoken online, and this tradeoff between costs and benefits influences subsequent expressive actions online.

Technological Affordances

CMC literature has highlighted several characteristics of contemporary technologies by which these platforms create a new form of interpersonal and mass communication. This characterization has been commonly made based on the concept of “affordances,” referring to “possibilities of action” that emerge in the situation when technology and users interact (Faraj & Azad, 2012). Evans and colleagues (2017) proposed specific criteria that affordances should meet in order to be labeled as such. These include that social media affordances (1) neither belong to the individual user nor to the platform itself (i.e., it manifests itself in the relationship between human beings and technology), (2) may elicit behaviors and other outcomes, but do not represent the outcomes themselves (e.g., a particular affordance may invite political expression but it is not the political expression itself), and (3) have variability. For instance, the level of one common affordance—message persistence—can be high (e.g., on Twitter) versus low (e.g., on Snapchat). CMC research has identified several affordances enabled by contemporary network technologies including persistence (communication is automatically recorded and archived), replicability (messages can be duplicated), scalability (online content becomes highly visible), and searchability (online content is easily searchable) of messages (boyd, 2010). Relatedly,

scholars have identified other metaconstructs, which are similar to affordances in that they are “cross-situational properties and processes that are likely to affect any instance of communication” (Walther, 2017, p. 560) such as audience (the unique composition of the audience on networking platforms), anonymity (users’ notion to create profiles with pseudonyms versus their real names), visibility (the effort users need to expend to access information), and editability (the extent to which users are able to construct and re-construct their messages) (Fox & Holt, 2018; Treem & Leonardi, 2012; Walther, 2017).

The Costs and Benefits of Computer-Mediated Political Expression

Political expression is conceptualized as publicly disclosing one’s personal viewpoint on politically relevant issues and/or political parties and candidates. Political expression has functioned as one indicator of the extent to which citizens participate in society and contribute to deliberative democracy (Pingree, 2007). In computer-mediated settings, political expression can include a range of behaviors including sharing political content or images, posting one’s political views or opinions, commenting on or discussing political content and topics, or “liking” or recommending content (Lane et al., 2019). Expressive actions can vary along the *effort* individuals need to allocate to become politically outspoken: While “liking” a political comment does not require any particular elaboration besides a simple click, phrasing one’s political stance, for instance, connected with arguments and facts demands users’ effortful thinking and engagement (cf. Knoll, Matthes, & Heiss, 2018). Given these different options to be politically expressive, there is on-going debate about whether sharing or “liking” political information and someone else’s political views can be seen as a form of political expression or not (Kwak et al., 2018). We believe that political expressions, thus, can be characterized not only based on its

required effort by also considering its *explicitness*, meaning that, sharing someone's else political comment may be seen as a political expression, if the sharer voices their agreement or support.

Repeatedly, research has shown that whether and how individuals voice their political stances often depends on the circumstances in which they are situated (e.g., whether or not they feel as part of the majority; Noelle-Neumann, 1993; Matthes, Knoll, & von Sikorski, 2018). With a special focus on political campaigns, the Orientation-Stimulus-Reasoning-Orientation-Response (O-S-R-O-R) model (Cho et al., 2009) proposes that consuming political content that is promoted through media leads to a certain form of individual reasoning which can manifest itself in the form of political discussion or messaging that, in turn, can foster political knowledge. In the context of current technologies, the social media political participation model suggests that after encountering (either intentionally or incidentally) political content online, individuals can develop or activate certain participatory goals that drive their subsequent (either low- or high-effort) political action (Knoll et al., 2018). To what extent individuals' goals behind political expressions are connected to certain affordances and features individuals use on social media to undertake this political action has not been implemented in none of those models. This article argues that focusing on affordances as characteristics of the communication situation helps systematically describe those circumstances and unpack individuals' inner calculus on how they may benefit or be burdened by expressing their political viewpoints under those conditions.

There is evidence of the benefits that people perceive when expressing themselves politically, such as disseminating political knowledge (Gil de Zúñiga, Valenzuela, & Weeks, 2016), persuading or mobilizing others (Valenzuela, 2013), correcting allegedly distorted public opinion climates (Rojas, Barnidge, & Abril, 2016), presenting themselves as a politically interested person (Winter & Neubaum, 2016), learning new things themselves (Velasquez &

Rojas, 2017), or keeping in touch with others (Lane, Kim, Lee, Weeks, & Kwak, 2017). On the other hand, people also expect potential costs of becoming politically outspoken, such as investing time without having any political impact (Gil de Zúñiga, Jung, & Valenzuela, 2012), being negatively judged or attacked by others (Neubaum & Krämer, 2018; Vraga, Thorson, Kligler-Vilenchik, & Gee, 2015), or losing interpersonal relationships that have social or economic value (John & Dvir-Gvirsman, 2015; Neubaum & Krämer, 2017). Weighing costs and benefits of online political expression can create internal conflicts (Mor, Kligler-Vilenchik, & Maoz, 2015), which raises the question of under which circumstances the costs of expression outweigh the benefits and vice versa. Existing research has paid relatively less attention to the technological characteristics or circumstances that drive or inhibit political expression. The present article proposes a conceptual framework that addresses specifically how properties of communication situations (e.g., affordances) shape the perceptions of benefits and costs for expressing oneself.

A Conceptual Framework for Technological Affordances and the Costs and Benefits of Political Expression Online

A synthesizing investigation of technological affordances and individual costs and benefits requires asking how characteristics of communication platforms affect the psychological “black box” of the conscious or unconscious calculus users engage in before deciding to express political views online. To address this, the present conceptual framework relies on the notion in psychological research that human beings’ behavioral decisions are based on weighing anticipated rewards of a behavioral option against the expected costs (Payne, Bettman, & Johnson, 1993): The understanding of individuals as rational actors that base their behavioral choices on a cost-benefit reasoning has not only been pivotal in decision-making research

(Quartz, 2009), but also in the field of privacy research (Dienlin & Metzger, 2016; Laufer & Wolfe, 1977). This strand of research suggests that people's decision to disclose personal information can be seen as a form of "information management" best represented by a "calculus of behavior" that considers positive and negative consequences of their expressive actions. Applying this line of thought to situations of technology use in political communication, this work proposes that several technological affordances influence the subjectively perceived costs and benefits of becoming political outspoken on a platform. While perceived costs are thought to reduce political expression, perceived benefits are expected to promote this behavior. The relationship between technological affordances and the psychological process of a cost-benefit calculus, in many cases, may be conditional on factors previously identified in earlier, less technology-focused political expression research. More specifically, whether or not benefits of taking advantage of a certain affordance outweigh the costs – from a subjective point of view – is thought to be contingent on several factors including (a) *structural variables* such as the degree of stability or polarization of the political system or institutionalized censorship (Matthes et al., 2012); (b) *personal variables* like users' personal involvement with the topic and their cross-situational motivation to shape the public discourse on that topic (Matthes, Morrison, & Schemer, 2010), affective polarization or strength of political identity (Dvir-Gvirsman, 2018), social media literacy (Dubois & Blank, 2018), or personal privacy concerns and attitudes (Baruh, Secinti, & Cemalcilar, 2017; Dienlin & Metzger, 2016); and (c) *topical variables*, including whether the discourse about the focal issue is enduring or recently emerging (Yeric & Todd, 1996) and how much agreement there is between personal opinion and the opinion climate in society (Noelle-Neumann, 1993). Figure 1 visualizes our integrative propositions based on a

conceptual model offering a ground for further theoretical and empirical research that intends to explain the psychological processes leading to a politically expressive behavior.

In the following sections, we elaborate on a series of technological affordances and metaconstructs to exemplarily explain the psychological mechanisms we expect to be intertwined when individuals make the decision to express themselves politically via social technologies. We selected four particular affordances and metaconstructs because those (a) have been repeatedly proposed to remarkably shape individuals' communication behavior and (b) been researched extensively in the field of self-expression as it is reflected by their prominence in the corresponding non-political CMC literature (Evans et al., 2017, Walther, 2017). Within the discussion of each affordance or metaconstruct, we offer examples of the perceived costs and benefits of expression, as well as of structural, personal, and topical variables that may condition expressive behavior.

Anonymity of the Expressor

The affordance of anonymity online refers to the extent to which a message source is identifiable by others (Evans et al., 2017). Anonymity online varies and social platforms typically fall into one of three general categories in terms of user anonymity. Completely anonymous platforms allow users to interact without disclosing any information about their real identity (e.g., 4chan). Users of pseudonymous platforms like Reddit can create screen names or profiles that may or may not be associated with their real identity. Finally, highly identifiable platforms may require users to use their real names and have their identity be verified (Ellison, Blackwell, Lampe, & Trieu, 2016). For example, Facebook is an identifiable platform that requires users to provide a real email account for use.

Anonymity is an important affordance for computer-mediated political expression. The affordance of anonymity is likely to affect not only whether people express themselves online in the first place, but also the nature of that expression. Anonymity therefore offers both several costs and benefits for political expression online: First, the degree of anonymity afforded by social media platforms should impact whether or not people express their political opinions online. Spiral of silence theory suggests that people are more reluctant to publicly express their political views when they perceive that their opinion is in the minority for fear of social sanctions or isolation (Noelle-Neumann, 1993). These social sanctions could be perceived as potential costs for expressing oneself when being identifiable online (Schulz & Rössler, 2012). Indeed, empirical studies reveal that people feel more constrained in non-anonymous communication channels and are less inclined to voice political viewpoints when they have a sense of being identifiable (Luarn & Hsieh, 2014; Shim & Oh, 2018; Wu & Atkin, 2018). Publicly expressing one's opinion on social media can be a socially risky behavior for many users because of the uncertainty about who the audience is and how they will interpret the message, and could lead to social isolation (Thorson, 2014). In addition, the permanence of identifiable messages and the possibility of being trolled or personally attacked often prevent people from non-anonymous expression online (Weinstein, Rundle, & James, 2015).

Second, the level of anonymity should also affect the nature of expression on social media. Anonymity and reduced identification in CMC can lead to deindividuation. Deindividuation is the process in which awareness of the identity of the self, others, and the social environment are diminished, leading to a breakdown in adherence to social norms (Postmes, Spears, & Lea, 1998). The loss of guidance by social norms and reduced consequences of socially unacceptable behavior provided by anonymity can change the nature of political

expression online. If people are no longer identifiable online, they may feel the freedom to engage in political expression that is more honest and reflects their true feelings. Anonymity can also allow individuals to express political opinions that are socially unacceptable or in the minority, such as conservative viewpoints on socially liberal college campuses (Lane et al., 2018). At the same time, anonymity can foster greater levels of incivility (Rowe, 2015) and even provoke the production and distribution of reprehensible content including propaganda, misinformation, or conspiracy theories (Farkas, Schou, & Neumayer, 2018).

In contrast, having an identifiable conversant in CMC may increase the civility and deliberative value of online expression (Stroud, Scacco, Muddiman, & Curry, 2015). However, it is conceivable that under identifiable circumstances, users decide to “speak up,” by participating in a conversation without necessarily expressing their opinion, rather than to “speak out” in the sense of an explicit articulation of a political viewpoint (McDevitt, Kioussis, & Wahl-Jorgensen, 2003). This more avoidant strategy of expressing oneself (see Hayes, 2007) could reduce potential costs in terms of social sanctions (Neubaum & Krämer, 2018) and increase benefits in the sense of maintaining interactions or relationships with others (Lane et al., 2017). While anonymity may allow individuals the ability to express what they truly think, other work suggests that CMC does not necessarily enhance disagreeable communication, instead at times it can serve to lower expression of disagreement compared to face-to-face communication (Stromer-Galley, Bryant, & Bimber, 2015).

The effects of anonymity online should also theoretically vary or be moderated based on a number of contextual factors at both the individual and environmental levels. At the individual level, people who are stronger partisans or have higher levels of political interest or efficacy may be more likely to express themselves, even when they are highly identifiable online (Hampton et

al., 2014). Still, it is unclear how persuasive anonymous expressors are. Future research could address to what extent anonymity makes recipients susceptible for persuasion by user-generated political expressions (Weeks, Ardévol-Abreu, & Gil de Zúñiga, 2017). At the environmental level, the degree of anonymity should interact with a number of factors. First, who the audience is should interact with anonymity to influence political expression. People should be less likely to express an identifiable position when they perceive their opinion to be in the minority, while simultaneously be more willing to express identifiable opinions in highly homogenous social networks (Neubaum & Krämer, 2017).

Visibility of Messages

The networked nature of contemporary communication technologies enables one-to-many communication in which individuals are able to reach large groups of people (Ellison & Vitak, 2015). In other words, one's message is visible, in many situations, to an inestimable number of audience members. Socially mediated visibility, as an affordance of social media technologies, has been defined as whether a message can be accessed and how easily it can be accessed by its audience (Evans et al., 2017).

The varying reach of a social media message represents an important characteristic of computer-mediated political expression: political expressions may not produce their intended effects if they are not viewable to others (Edgerly, Thorson, Bighash, & Hannah, 2016). Likewise, political interactions cannot be initiated and evolve if messages are not made visible to each other (Literat & Kligler-Vilenchik, 2019). Access to and, therefore, visibility of political messages could contribute to social technologies serving as a public sphere in which citizens get the chance to become informed and engage in deliberative discourses (Dahlgren, 2005). The

variation of visibility of political messages, thus, determines the ultimate political impact of expression on social media.

In users' perceptions, high versus low visibility of online messages might come with both benefits and costs of expressing oneself politically (Pearce, Vitak, & Barta, 2018). In terms of potential benefits, high visibility in the form of a public YouTube video or Facebook status update on a current political debate offers an effective forum to influence and mobilize a large group of people simultaneously (Bond et al., 2012; Jost et al., 2018). This visibility can lead to personal benefits like making one's standpoint more socially accepted (Weeks et al., 2017) or exerting power over others by promoting norms or interpretations of current political problems (Pearce et al., 2018). Moreover, collective benefits are conceivable by creating or contributing to large-scale movements that shape the political system or society (Maireder & Schwarzenegger, 2012) or by making the widely attended opinion landscape more diverse and correcting allegedly distorted opinion climates (Rojas et al., 2016).

Low visibility (e.g., in a pre-defined instant messenger group with a few people) may be associated with greater control over the audience of one's political message, targeting a certain group of people whose expertise, interest, beliefs, or opinions might match the message sender's (Thorson, 2014). Thus, low visibility goes hand in hand with the option of deliberately increasing or reducing the audience's relational and ideological diversity, either with the benefit of reaching non-like-minded others to hold deliberative discussions with political learning gains (Scheufele, Nisbet, Brossard, & Nisbet, 2004) or with the benefit of encountering reinforcement or affirmation with like-minded others (Literat & Kligler-Vilenchik, 2019).

Given that high visibility of social media messages is associated with relational and ideological diversity (Neubaum & Krämer, 2017; Pearce et al., 2018), social media users are

confronted with potential relational costs as well. First, users perceive that political expressions on social media channels with a large, or at least inestimable, audience are risky because they fear offending or being attacked by others who disagree with them: As documented by research, these expectations are based on emotions such as fear (e.g., of being harassed by others) (Neubaum & Krämer, 2018; Vraga et al., 2015) and are supposed to operate on an affective level that might govern or even override a cognitive calculus of benefits and costs. Second, political disagreements detected because of a highly visible message could also entail relationship dissolution, meaning that others could terminate the relationship to the message sender – be it in digital (John & Dvir-Gvirsman, 2015) or in offline life. Fearing social consequences for being deviant from social norms is deeply rooted in human condition as proposed by the spiral of silence theory and expressing a minority viewpoint in a highly visible communication channel can certainly mean high personal and social costs for the individual (Noelle-Neumann, 1993).

The costs for a less visible message are easy to detect: Some social media users might have the sense that their messages could get lost in a large stream of information so that their time and effort investment for articulating their opinion in a comment would have little political, interpersonal, or societal impact (Gil de Zúñiga et al., 2012).

Arguably, high visibility through social media channels is perceived as a benefit for some users in some situations, while for others the costs of visibility outweigh the benefits. Following the idea of the so-called “hard core”—individuals who have strong attitudes and express those in disregard of the prevailing opinion climate (Matthes et al., 2010; Noelle-Neumann, 1993)—one could ask: Do those who truly believe in the correctness of their viewpoints also perceive the benefits of reaching a large group of people via social media as greater than the costs, making it more likely that they will voice their opinion? On macro-social level, it is yet to be examined

whether the costs of expressing political opinions in a highly visible channel will outweigh the benefits for users in countries in which freedom of speech is limited or social harmony is seen as a highly important virtue (Rosenthal & Detenber, 2014). In these contexts, political expressions might be less likely in highly than less visible communication environments.

While message's visibility in social media is associated with many ideals promoted by the concept of deliberative democracy, it entails a series of social costs for the individual which might explain the overall low levels of public opinion expression in highly visible social media channels.

Persistence of Messages

Social media platforms provide features that enable users to vary the longevity of messages: while an Instagram story would be accessible for other users for 24 hours, a tweet or a Facebook comment could be recorded and archived for an inestimable amount of time unless users deliberately remove it (see Haber, 2019, and the “digital ephemeral turn”). Research has referred to this affordance as persistence (or ephemerality as the opposite) in the sense of “whether, and for how long, previous messages remain accessible to participants” (Herring, 2001, p. 615) and that high persistence is given when “expressions are automatically recorded and archived” (boyd, 2010, p. 46).

In its original understanding, deliberative democracy referred to the ideal of a maximum of lay citizens debating current politically relevant questions in public spaces such as the Greek Agora or Paris' salons (Price, 1992). This exchange of messages including opinions, ideas, and arguments occurred in the form of ephemeral face-to-face communication, ideally leading to informed decisions for permanent changes in policies. However, when political deliberation is recorded, archived, and made accessible to the public for an indefinite period of time (as it often

is in social media), it is not only any resulting policy change but also the political expression itself that is long-lasting. This permanence, along with high visibility, clearly fulfills one crucial condition for a well-functioning public sphere in the sense that politically and civically relevant debates are made accessible to as many citizens as possible in a sustainable manner (Dahlberg, 2001). At the same time, this increased durability of political messages has implications for individuals voicing their viewpoints, as they are met with heightened accountability and their statements are traceable to their identity for an inestimable amount of time. This may reduce the likelihood of users expressing shifts in their viewpoints in order to remain consistent with recorded opinionated messages.

The level of permanent accessibility to a message clearly determines to what extent expressions can be duplicated, spread, and interpreted out of context (boyd, 2010) which, in turn, has implications for users' internal calculus of benefits and costs. On the benefits side, highly persistent communication increases the potential visibility of one's political message, meaning that it is possible to inform and persuade others in a durable form (Winter & Neubaum, 2016). Another opportunity provided by enduring forms of communication is that political deliberation is made sustainable insofar as future generations will be able to access debates with its questions, beliefs, and arguments to inform their own political debates and policy decisions. This might appear beneficiary for the individual user as their civic duty would be fulfilled in an even more impactful, long-lasting way (Ohme, 2018).

Ephemerality in the form of messages available for a limited amount of time, in contrast, is associated with an increased sense of privacy and control (Morlok, Constantiou, & Hess, 2018) as well as lowered accountability for one's expression, which can also be perceived as beneficial: online spaces that are experienced as more private allow more authentic

communicative practices as the individual perceives that he or she can express their true-self in an uninhibited way (Xu, Chang, Welker, Bazarova, & Cosley, 2016) which could not only increase the level of subjective well-being but also foster innovativeness and creativity in proposing or articulating challenging views.

Having one's political opinion expression archived publicly, at the same time, implies the risk that one's message is consumed, interpreted, and judged differently in a later temporal context. More specifically, while one's expressed viewpoint may be in line with the present opinion trend in society, it could be deviant from future majority opinions and, therefore, be evaluated negatively or even as morally reprehensible by others a few years or decades later (Fox & Holt, 2018). The costs for this discrepancy with future opinion trends (or with one's own future opinion statements) could be manifold: personal and professional ties (e.g., when future employers check applicants in search engines) could form negative impressions about the person who posted their political opinion, entailing either interpersonal conflicts, relationship dissolutions, or professional and economic costs because of questionable political statements previously made online (Neubaum & Krämer, 2017). Following this logic, in highly persistent communication channels, individuals might engage in self-presentational concerns in which the risks of "not being in line" with (future) norms or conventions (Xu et al., 2016) outweigh the benefits of advocating for a political purpose. Generally, as revealed by a recent experiment manipulating the level of persistence in social media, users associate higher levels of personal costs and lower levels of personal benefits with a high persistence form of communication (Neubaum, 2021). Two of the most salient perceived costs were fears of being either negatively judged or even attacked by others. Thus, the affective dimension seems to be key in this behavioral calculus.

Political messages that disappear after a certain amount of time, though, are perceived as less useful for deep conversations (Xu et al., 2016), which would not justify the effort of articulating one's point of view, corroborated with facts and arguments. Subjective costs of ephemerality, on the one hand, may be investing intellectual work in expressing oneself that is accessible to others in a short-lived way, reducing its political but also interpersonal impact. Indeed, research shows that while ephemeral messages are experienced as enjoyable, they are not seen as useful for receiving social support from others (Bayer, Ellison, Schoenebeck, & Falk, 2016). Thus, an important driver for expressing oneself politically online, which is the purpose of maintaining interpersonal relationships (Lane et al., 2017), may be hardly fulfilled by ephemeral messages. Moreover, if online ephemerality is supposed to provoke disinhibited communication behavior (Waddell, 2016; Xu et al., 2016), individuals using these channels could also encounter questionable or uncivil actions by other users (such as personal attacks, aggressive language, obscenity) as a response to their political expression. Users would then meet with more severe social sanctions for voicing a political standpoint.

Initial evidence shows that perceived message persistence in social media is positively associated users' willingness to self-censor online (Fox & Holt, 2018; Morlok et al., 2018; Neubaum, 2021). However, it seems plausible to assume that the relationship between level of persistence and political self-expression is moderated by dispositional and contextual variables. For instance, are users less likely to become politically outspoken in highly persistent channels when the given statement is about a controversial or emerging topic that recently became part of a public debate (Yeric & Todd, 1996) and its related opinion climate might change in the future? Likewise, are users with strong privacy concerns and increased level of privacy needs more inclined to prefer ephemeral communication channels for their political expression than channels

with permanent recordability and archivability? Answering these questions could help to uncover the motivational complexity behind political expressions online.

The “digital ephemeral turn” within social media platforms might evoke fruitful discussions about how varying levels of persistence of political deliberation make social technologies a more or less functional public sphere.

Expressive Message Characteristics

Although they may not meet the criteria of an affordance, message characteristics of political expression are key metaconstructs for computer-mediated political expression. They refer to qualities of messages that can be shaped either by the *content creators* or by the *system* they use. Message characteristics include but are not limited to the content, style, strategy, and argument forms used by those who express themselves online (Walther, 2017). For instance, messages may vary in their quality, emotional valence, argument depth, argument diversity, the use of evidence or claims supported by expertise (Pingree, 2007). Thus, based on message characteristics as qualities, political messages can be characterized on a *cognitive* (e.g., concerning argument depth) and an *affective* (e.g., valence, incivility) level. At the same time, they allow the characterization of a message based on the *effort* that needed to be allocated to create this expression: Platforms like Facebook and Twitter offer users the ability to express themselves through high-commitment messages like writing a post with their political opinion, as well as more low-commitment (and non-verbal) messages like liking, sharing, or retweeting content (Bode, 2017; Lane et al., 2019).

The characteristics of political messages expressed online are important for a number of reasons. First, variance in message characteristics like technological ease of use may influence whether or not people express themselves politically in the first place. For example, people are

more likely to engage in relatively easy forms of expression such as liking political content, whereas messages that feature more argument depth may be limited to those who are more politically engaged or interested (Bode, 2017). Second, message characteristics like topic, relevance, civility, interactivity, or the provision of evidence may determine the interest level and persuasiveness of a message when it is received by others in one's social network (Muddiman & Stroud, 2017; Stroud et al., 2015; Winter & Krämer, 2012; Ziegele, Breiner, & Quiring, 2014), but also the general deliberative quality of the debate (Friess & Eilders, 2015). Especially, the (in)civility of political discussions has received extensive scholarly attention, revealing that many political expressions are impulsive actions driven by affect (e.g., rooted in one's political ideology and group identification) and that its level of incivility can significantly influence the evolution of a group discussion (Hutchens et al., 2019; Kaakinen et al., 2020). Third, the type of expression and its various characteristics are likely to have different consequences on key political outcomes like knowledge, engagement, and political identity. For example, expression through political messages that require composition (commenting, posting) promote more subsequent political interest, efficacy, and participation than does expression that requires less effort, such as liking (Lane et al., 2019).

Of course, different message characteristics can offer costs and benefits that affect both initial expression and the nature of that expression (Pingree, 2007). Messages that contain reasoned, well-argued points that are supported by detailed evidence require significantly more effort on the part of the expressor, which may limit expression in the first place. Such messages require the expressor to be politically knowledgeable and have confidence in their ability to craft such a message (Vaccari et al., 2015). Simply posting a political meme, photo, or video may be an easier and more realistic approach to political expression for most individuals (Edgerly et al.,

2016). In this way, technology lowers the costs of expression and may narrow expression gaps between those who are interested in politics and those who are not (Bode, 2017). The benefits of low-effort forms of expression such as “liking” an opinionated message (e.g., a meme) may be that users feel less accountable given that these activities are interpreted as ambiguous, not clearly pointing to a certain stance (Lee & Jang, 2010).

Following this logic, it is likely that users who are highly interested in a topic or generally in politics are more likely to use high effort forms of political expressions (Knoll et al., 2018). Messages that are well-reasoned or that constitute a strong social commitment may be beneficial not only to the receivers of those messages but also the expressor (Pingree, 2007). At the same time, in national contexts in which freedom of speech is structurally limited, users may feel more comfortable in expressing themselves in more subtle or even ambiguous ways, for instance, by re-tweeting or sharing an opinionated message (Pang et al., 2016).

Focusing more on message characteristics of computer-mediated political expression will allow researchers to better understand the conditions under which people express themselves online and the features those messages take on. For example, what distinguishes whether or not people engage in reasoned deliberative expression versus more low-commitment forms of expression (Bode, 2017; Pingree, 2007; Vaccari et al., 2015)? Why and when do people use uncivil or highly emotional language in their expression instead of more polite language (Stroud et al., 2015)? A message characteristic approach will also help political communication researchers better understand the effects of expression on the message expressor and the receiver (Pingree, 2007).

Conclusion: Future Applicability of Computer-Mediated Political Expression

Understanding the nature and consequences of political expression online has in recent years become one of the most prominent areas of political communication research. Researchers have made great strides in identifying the conditions under which expression occurs, how people express themselves, and to what effect. However, political expression research has not fully embraced the vast and deep literature on computer-mediated communication, in particular research on technological affordances. Building on previously identified reasons for expressing or withholding political views, this work offers a unique integrative framework that connects different manifestations of technological affordances with the psychological tradeoff of costs and benefits as the explanatory mechanisms behind people's political expression in contemporary technologies. While previous models in the field of political communication accounted for the connections between political content influencing personal goals to engage in participatory activities (Cho et al., 2009; Knoll et al., 2018), those models remain unspecific about the technological tools and affordances available to the individual to engage in those participatory actions such as expressing themselves. This work contributes to a comprehensive prediction of computer-mediated political expression by systematically considering the qualities of the communication situation, best represented by the variation of technological affordances. The focus on affordances, instead of a focus on specific platforms, allows researchers to create more sustainable evidence that survives technological trends and informs theory-building literature in this field.

That said, what does a computer-mediated political expression research paradigm look like? First, it adopts an affordances-centered approach that takes advantage of the ways in which people actually use technology. We have outlined four prominent affordances (Evans et al., 2017) or metaconstructs (Walther, 2017) that are prominent in CMC research that could be easily

better adopted by political expression research. The list is of course not exhaustive. Clearly, the processes outlined above can be applied to further affordances such as editability (potentially increasing the perceived benefit of being reflective when crafting a political message but also increasing the time investment cost) or association (triggering the benefit of reaching people from many different personal backgrounds but also related to the cost of aspiring the “lowest common denominator” in self-presentation). We believe that the affordances explicated in the present article offer an initial framework for studying political expression. Importantly, any integration of an affordance-based approach must acknowledge that these affordances and metaconstructs do not exist in isolation and each may have both a unique and interactive impact on an outcome of interest. In this way, affordance-based computer-mediated political expression research should adopt an approach similar to what Eveland (2003) called a “mix of attributes” that examines these factors holistically.

Second, such an approach could use experimental designs to manipulate various affordances and other key factors to better isolate the conditions that affect expression. For example, an experiment could easily alter affordances like anonymity of the expressor, the persistence of the message, and certain message characteristics to examine how they impact expression (Lane et al., 2018) or its effects. Survey-based research could explicitly measure individuals’ attitudes toward these affordances to examine how those feelings affect the nature of expression. Importantly, any adoption of a CMC or affordances-based approach must also incorporate the key variables that have historically been vital to political expression research. These include key moderators at the structural, personal, and topical levels. Integrating these more political communication-based variables with the affordances literature will uncover more

of the cost-benefit calculations people make in deciding if and how to express themselves politically.

Third, a research program addressing how affordances and connected cost-benefit tradeoffs affect political expression should consider the reciprocal nature of technology use and technology effects (Slater, 2007): once users experience that the use of a certain affordance was either beneficial (e.g., by successfully mobilizing others) or harmful (e.g., by becoming a target of personal attacks), they will take this experience into consideration when deciding whether to publish personal viewpoints in online channels. Therefore, the relationship between the use of affordances, the expected level of benefits and costs, as well as the likelihood or the form of political expression should be conceptualized as continuous, dynamic, and reciprocal.

Fourth, future research will face the challenge to debate whether citizens are rational enough to go through an elaborated inner calculus of benefits and costs. This is related to further questions: are users able to verbalize perceived costs and benefits? Are they aware of varying levels of visibility or persistence and what they mean? Research presented here that documented main effects of these affordances on self-censorship suggest a certain level of awareness. It is important to note that while discussing the user's inner calculus of costs and benefits paint the user as a "rational actor," we argue that this calculus may not always occur in an explicit and deliberate way preceding every decision about expressing oneself. Rather, we believe that whether political expression is subjectively perceived as personally/collectively beneficial or costly is the result of repeated and habitual use of those technologies. Thus, users may have acquired the skills to quickly and effortlessly evaluate potential consequences. But even if users are not aware of costs and benefits, future works could explore communication channel selection patterns and deduce post hoc which channel is perceived as useful, beneficial, or harmful for

which expression. Moreover, it seems worthwhile to also investigate the circumstances under which the rational cost-benefit calculus is not at work anymore – for instance, when cognitive load is high or when emotions (e.g., anger, fear) drive political actions.

In an era wherein users consume and exchange political messages in complex communication systems that are marked by connectivity, non-linearity and automaticity, it is instrumental to reduce this complexity by disentangling which technological conditions lead to which communication effects. When addressing political expression as a communication effect and, ultimately, investigating the question of the extent to which communication technologies are used as a deliberative forum, we argue that a systematic integration of CMC research is indispensable. Without comprehensive and integrated theoretical explanations for why, how, and when political expression online occurs and its effects, research in this area will languish (Walther, 2017).

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Figure 1. Conceptual model displaying the influence of a technological affordance on political expression mediated through perceived costs and benefits and moderated by personal, structural, and topical variables