The Way We Use Social Media Matters: A Panel Study on Passive Versus Active Political Social Media Use and Affective Polarization

JÖRG MATTHES
ANDREAS NANZ
RUTA KASKELEVICIUTE
FRANZ REITER
University of Vienna, Austria

ISABELLE FREILING
University of Utah, USA

ARIADNE NEUREITER
MARLIS STUBENVOLL
SEBASTIAN E. SHERRAH
SARAH JURICEK
ATIKA AISYARAHMI MUNZIR
IARA NORONHA
University of Vienna, Austria

When looking at the origins of affective polarization, political communication scholars have frequently pointed to social media. In this article, we theorize that the relationship between social media use and affective polarization depends on the ways in which social media are used. Based on two-wave panel data collected during a national election campaign, our findings suggest that only active political uses of social media (i.e., sharing,

Jörg Matthes: joerg.matthes@univie.ac.at
Andreas Nanz: andreas.nanz@univie.ac.at
Ruta Kaskeleviciute: ruta.kaskeleviciute@univie.ac.at
Franz Reiter: franz.reiter@univie.ac.at
Isabelle Freiling: isabelle.freiling@utah.edu
Ariadne Neureiter: ariadne.neureiter@univie.ac.at
Marlis Stubenvoll: marlis.stubenvoll@univie.ac.at
Sebastian E. Sherrah: sebastian.edward.sherrah@univie.ac.at
Sarah Juricek: sarah.juricek@univie.ac.at
Atika Aisyarahmi Munzir: atikaaisyarahmii@yahoo.com
Iara Noronha: ara.noronha.dos.reis@univie.ac.at
Date submitted: 2021-11-17

posting, or commenting) foster affective polarization; in contrast, passive uses (i.e., informing oneself) do not. Looking at reciprocal relationships, we found that affective polarization did not significantly predict active or passive political social media use over time. Overall, our findings support the argument that social media are neither unconditionally detrimental nor beneficial for society and democracy.

Affective polarization, defined as the tendency of partisans to dislike, distrust, and avoid interacting with those from the other party (Iyengar, Sood, & Lelkes, 2012), appears to be a major feature of modern political communication, particularly in the United States, but increasingly also in Europe (Kubin & von Sikorski, 2021). In the United States, with its traditional two-party system, scholars have observed a tremendous increase in affective polarization over the past years, particularly in the Trump era (Lelkes, 2016; see also Abramowitz & Saunders, 2008; Fiorina, Abrams, & Pope, 2008; Schmuck, Heiss, & Matthes, 2020). The concept of affective polarization implies not only the radicalization of ideological positions and the emptying of moderate positions but also the increase of divergences and emotional reactivity toward others (Iyengar, Lelkes, Levendusky, Malhotra, & Westwood, 2019). The underlying psychological mechanism has been long known. Five decades ago, Billig and Tajfel (1973) showed that the perception of belonging to a group can lead to strong affective reactions toward an out-group, even if group membership is determined by small, perhaps even banal, characteristics. Yet, as Iyengar and colleagues (2019) pointed out, identification with the group in the context of political preferences evidently goes far beyond the banal.

Scholars have frequently pointed to social media use as one of the key driving factors of affective polarization (Kubin & von Sikorski, 2021). The frequently expressed argument is that social media can reinforce the human tendency to form homogenous groups, for instance, by surrounding ourselves with like-minded others in our social networks, forming "echo chambers," and avoiding contact with camps holding opposing political views (Beam, Hutchens, & Hmielowski, 2018). As intuitive as this argument may sound, the evidence for the effect of social media use on affective polarization is far from clear (Nordbrandt, 2021). At the same time, research suggests that echo chambers do not always and unconditionally prevail on social media (Garrett, 2013).

Even more importantly, most scholarship on affective polarization has conceptualized social media use as a monolithic category, simply measuring the frequency of social media use in general or of some platforms in particular (e.g., Xenos, Vromen, & Loader, 2014). However, hardly any research on affective polarization has paid attention to *how* individuals use social media, that is, either in passive ways (i.e., mere reading) or in more active and expressive ways (i.e., posting, sharing, liking). This is surprising because the conceptual distinction between active and passive use is well established in social media research (Burke, Marlow, & Lento, 2010; Stevic, Schmuck, Matthes, & Karsay, 2021; Trifiro & Gerson, 2019; Verduyn, Ybarra, Résibois, Jonides, & Kross, 2017). Although previous research has indicated that the type of content that is consumed online via social media is important when looking at the effects of social media use (e.g., Gainous, Abbott, & Wagner, 2021), in political communication research it has been uncommon until now to distinguish between active and passive social media use (but see e.g., Yu, 2016). In line with this, many scholars of

various academic disciplines investigating the effects of social media use see the homogeneous measurement practice as a core limitation of their studies as it reduces information and oversimplifies social media use. More precisely, the differentiated measurement of various forms of social media use and interaction would make findings more nuanced and hence, richer (e.g., Frison & Eggermont, 2016; Gainous et al., 2021; Schmuck, Karsay, Matthes, & Stevic, 2019). As Gainous and colleagues (2021) stated, "it is not enough to measure what people are viewing online; we need to understand how they engage with the material as well in order to understand the behaviors that result" (p. 478). Likewise, Lee, Rojas, and Yamamoto (2022) call the field to "deeply explore how different political uses of media (e.g., news consumption, expression, discussion, etc.) can affect levels of polarization" (p. 18).

Further complicating things, most research on the relationship between (social) media use and affective polarization comes from the United States, with limited generalizability to other parts of the world that have different political and media systems. How media use drives affective polarization in the contexts of multiparty systems and strong public service broadcasters is virtually unknown (Kubin & von Sikorski, 2021). And finally, most evidence stems from cross-sectional studies, which do not allow assumptions about directionality (Nordbrandt, 2021). A relationship between social media use and polarization could be interpreted in both directions, social media use driving participation, and vice versa. This has not been clarified in extant research (Nordbrandt, 2021). The present article attempts to contribute to filling these pressing research gaps in various ways. First, we report findings from a two-wave panel study. Second, for the first time, we estimate the relationships between both active and passive political social media use and affective polarization over time. Lastly, we examine the reciprocal effects of affective polarization on active and passive social media use.

Social Media Use and Affective Polarization

Affective polarization is based on the concept of social distance (Bogardus, 1947; Iyengar et al., 2012) and describes "the tendency for partisans to dislike and distrust those from the other party" (Druckman, Klar, Krupnikov, Levendusky, & Ryan, 2021, p. 28). Individuals with high levels of affective polarization have highly favorable feelings toward their in-group (i.e., those who identify with the same party) and highly unfavorable feelings toward their out-group (i.e., those who identify with other parties). Affective polarization has been associated with social attitudes and behaviors such as how long people stay at Thanksgiving dinners with family members from a partisan in- or out-group (Chen & Rohla, 2018) or who individuals consider for romantic relationships (for an overview, see Iyengar et al., 2019). It can also foster hostile media perceptions (e.g., Matthes, 2013; Matthes & Beyer, 2017). An explanation for this translation of affective polarization that comes from partisan and ideological attitudes to other aspects of life is an alignment of other social identities with the "mega-identity" of partisanship (Mason, 2018, p. 14). Also, evidence surrounding COVID-19, for instance, shows that affective polarization is related to political beliefs and policy attitudes (Druckman, Klar, Krupnikov, Levendusky, & Ryan, 2020). Furthermore, partisan animosity is associated with attitudes about and behaviors with respect to COVID-19 (Druckman et al., 2021).

Scholars have frequently pointed to the use of social media as one of the key drivers of affective polarization. In this context, some scholars have espoused a dystopic landscape where technology—and by

extension, social media—contributes to greater distance, aggression, and insularity among the public (Garrett, Carnahan, & Lynch, 2013; Hong & Kim, 2016; Matuszewski & Szabó, 2019). Others have argued for an optimistic understanding of social media as a new space in public life, built on ideas of citizenship, commonality, accessibility, accountability, and an opportunity for greater connection between the government and its citizens (Papacharissi, 2002). Besides these two diametrically opposed understandings of social media's contribution to public life, a third view emerged, which largely posits that the way we use technology rather than the technology itself matters for societal change (Banschick & Banschick, 2003).

But why should social media actually foster affective polarization? In answering this question, scholars have pointed to the existence of echo chambers on social media, which decrease the tolerance for opposing views, strengthen the identification with the political in-group, or even lead to a dehumanization of out-group members (Matuszewski & Szabó, 2019; Stroud, 2011; Tappin & McKay, 2019). Furthermore, the presence of opposing views on social media may encourage users to search for news or other educational resources that reinforce their existing beliefs (Wollebæk, Karlsen, Steen-Johnsen, & Enjolras, 2019).

Despite these strong and widely cited theoretical arguments, surprisingly, the evidence for a relationship between social media use and affective polarization is mixed (Nordbrandt, 2021) although previous research suggests that particularly negative (Banks, Calvo, Karol, & Telhami, 2021), counter-attitudinal (Heiss, von Sikorski, & Matthes, 2019), and uncivil (Kim & Kim, 2019) content on social media can increase polarization.

Scholars have also questioned the notion that citizens are stuck in echo chambers (Bakshy, Messing, & Adamic, 2015), and some research shows that only a few people are in echo chambers (Dubois & Blank, 2018). The echo chamber phenomenon might therefore be overstated, and previous research suggests that affective polarization might also be conditional on other factors. Regarding specific platforms, social media like Twitter affectively polarize people, while messenger apps like WhatsApp depolarize (Lee et al., 2022; Yarchi, Baden, & Kligler-Vilenchik, 2021). It is possible that these dynamics stem from different constellations of groups on these platforms (heterogeneous vs. homogeneous; Yarchi et al., 2021), especially since other research shows that like-minded discussion reinforces affective polarization (Zheng & Lu, 2021), while cross-cutting discussions mitigate affective polarization (Marchal, 2022).

Besides, the social and partisan identities of individuals might moderate the influence of social media use on affective polarization. A study on Chinese and Hong Kongese identities shows that political social media use polarizes people who identify with only one of these two social identities, whereas it depolarizes people who identify with both social identities (Kobayashi, 2020). Moreover, heightening partisan ambivalence weakens affective polarization for moderately ideologized individuals although it has the opposite effect on those with strong ideological beliefs (Levendusky, 2018). These studies show that various factors can account for the rise of affective polarization from social media use.

However, with a few exceptions (e.g., Harel, Jameson, & Maoz, 2020; Matuszewski & Szabó, 2019; Yarchi et al., 2021), most studies on political polarization have focused on the United States, and there have been limited attempts to explore polarization through panel surveys, with most studies using cross-sectional survey designs (Carlin & Love, 2018; Martini & Torcal, 2019; Webster & Abramowitz, 2017; Westwood et

al., 2018). Panel surveys that can tell us about influences and not only about associations, like cross-sectional surveys, are therefore needed to get deeper insights into the directionality of the relationships (Nordbrandt, 2021). An additional gap in the literature is the focus on social media as a generic category with less focus on *how* individuals use it. Some citizens may use social media to merely inform themselves about political matters, without actively engaging in interactions with others. Other citizens may frequently share, post, or comment on information on social media, that is, express their views more actively. Research is yet to differentiate between active and passive social media use. This is highly relevant since the ways in which social media are used might affect the level of affective polarization an individual exhibits.

Active Versus Passive Use of Social Media as a Driver of Affective Polarization

To get a deeper understanding of the relationship between social media use and affective polarization, we need to get insights into how individuals engage with content on social media (e.g., Gainous et al., 2021). In other words, a nuanced understanding of how individuals use social media is needed to draw detailed conclusions regarding the political consequences of it for them. Social media use can, in general, be classified into active and passive use (Burke et al., 2010; Trifiro & Gerson, 2019; Verduyn et al., 2017). The conceptual distinction may be a first step in the direction of more nuanced findings on social media use and affective polarization.

Active social media use refers to actions that "facilitate direct exchanges" (Verduyn et al., 2017, p. 281) with other users. Such activities encompass, for example, posting or commenting on or liking posts of other users (Burke et al., 2010). *Passive social media use*, in contrast, can be defined as "the monitoring of others without direct engagement" (Trifiro & Gerson, 2019, p. 1). Studies exploring active and passive social media use have mostly considered outcomes related to well-being (Burke et al., 2010; Verduyn et al., 2017), neglecting political outcomes. As a rare exception, the cross-sectional study by Yu (2016) found that nonpolitical active use was positively related to increased political expression, whereas nonpolitical passive use was unrelated to political expression. Survey findings by Gainous and colleagues (2021) suggest that passive and active use may be related to different outcomes. However, research evidence is scarce in terms of possible differences in the effects of (political) passive and active social media use on affective polarization.

Given the theoretical explanations offered in the previous section, there are grounds to assume that the usage of social media, by and large, increases affective polarization over time. However, the effects may differ with respect to active versus passive political social media use. When it comes to passive use, social media may increase political polarization mainly because of the statistical likelihood that the content is pro-attitudinal, negative, critical toward political opponents, or even uncivil (Matuszewski & Szabó, 2019; Stroud, 2011; Tappin & McKay, 2019; Wollebæk et al., 2019). When it comes to active use, these effects may fortify due to two reasons. First, sharing, posting, and commenting on political information may intensify information processing (e.g., Pingree, 2007). Rephrased, one is more likely to thoroughly read a piece of information when there is an intention to share, post, or comment on it, as compared with a situation in which the information is followed rather passively. Such cognitive elaboration has been found to be a predictor of polarization generally (i.e., thought-induced polarization; Chaiken & Yates, 1985; Tesser & Conlee, 1975). When elaborating on political content, individuals are likely to become aware of their likes and dislikes, which is an antecedent of affective polarization. Second, active social media use can be, in

part, considered as a form of expression (see Pingree, 2007). As noted by Lane and colleagues (2019), the expression of views on social media "can constitute a commitment to a specific public image" (p. 50), strengthening individuals' political self-concepts. Once opinions are expressed on social media, individuals may strive for cognitive consistency. In doing so, they are rather unlikely to alter their views (Cho, Ahmed, Keum, Choi, & Lee, 2018). Instead, when engaging in active political social media use, individuals are "more likely to comply with the expressed idea because the initial behavior will change his or her self-image," and as an additional mechanism, "individuals observe their own behaviors and infer that they must have a preference for the expressed idea" (Cho et al., 2018, p. 88). All this makes polarization more likely than depolarization after expression. Moreover, when expressing one's views, individuals may get feedback, such as comments or "likes." In the case of like-minded reactions, affective polarization may be spurred because citizens may receive additional approval for their ideas. In the case of cross-cutting reactions, individuals are likely to defend their publicly expressed ideas, which in turn, may enhance negative feelings toward the out-group. Thus, active social media use may have a larger impact on affective polarization compared with passive use. The following hypotheses are therefore put forth:

H1:   (a) Active and (b) passive political social media use are positively associated with affective polarization over time.

H2:   Active political social media use is associated with a higher degree of affective polarization than passive political social media use over time.

Affective Polarization as a Driver of Active Versus Passive Use of Social Media

However, the directionality of the relationship between active and passive social media use and affective polarization is far from being clear. As argued by Nordbrandt (2021), "Reciprocity in this context would mean that any correlation between social media use and polarization is not uni-directional" (p. 2). This idea is supported by the Reinforcing Spirals Model (RSM; Slater, 2007), which postulates that in various social contexts, media use can be seen as a dynamic process serving not only as an outcome but also as a predictor. According to the RSM, exposure to media content as well as the social group identification, attitudes, and behaviors form a reinforcing spiral: Media use influences attitudes, and these attitudes, in turn, affect media use over time, and so forth (Slater, 2007). With regard to affective polarization, it may be that as the theoretical framework of the RSM suggests, individuals strong in their political ideology seek to use social media passively and actively for political purposes, which subsequently could reinforce those political beliefs (see Hutchens, Hmielowski, & Beam, 2019). In line with the RSM (Slater, 2007), the revised communication mediation model states that "social media interactions can shape news consumption" (Shah et al., 2017, p. 497). More precisely, the revised model suggests that due to the current communication environment, it can no longer be theoretically assumed that conversations or social media interactions are influenced by news or media consumption but rather that social media interactions influence news consumption (Shah et al., 2017). In the context of active and passive social media use and affective polarization, this suggests that active and passive social media use may not only influence affective polarization but also that affective polarization may affect social media use (Shah et al., 2017; Slater, 2007). Yet there are no studies analyzing the impact of affective polarization on active and passive social media use.

When it comes to passive social media use, it can be theorized that affective polarization is associated with increased attention to political news. The reason is that polarized individuals tend to care about the topic of polarization, they hold strong views about it. As a consequence, polarization may decrease political indifference about a topic, fostering news use on that topic (Nordbrandt, 2021). In-group favoritism and out-group derogation (Rathje, Van Bavel, & van der Linden, 2021), for instance, have been found to be strong predictors of political engagement more generally (Iyengar & Krupenkin, 2018). That is, as affective polarization increases, individuals may be willing to learn from the news, be it to defend their own views or to become aware of the arguments that can be expected from their political opponents. Furthermore, affective polarization increases partisans' willingness to conform to their party's policy positions (Iyengar et al., 2019). But to conform to a party's policy positions, it may be necessary to be aware of them, for instance, by learning them through news exposure.

When it comes to active social media use, there is evidence that polarization drives expressive behaviors. For instance, Hutchens and colleagues (2019) found that affective polarization was associated with political discussion. Other research (Rathje et al., 2021) shows that derogatory language toward the out-group, as an indicator of affective polarization, can help explain social media engagement. Also, affectively polarized individuals have been found to be likely to share news on social media (Osmundsen, Bor, Vahlstrup, Bechmann, & Petersen, 2021). Taken together, it can therefore be predicted that affective polarization should foster active as well as passive social media use over time. Yet there are neither theoretical arguments nor any prior research that allow us to predict whether this relationship is stronger for active or passive social media use. We thus formulate one more hypothesis and one research question.

H3:   *Affective polarization is positively associated with (a) active and (b) passive political social media use over time.*

RQ1:   *Is the relationship described in H3 higher for active or passive social media use?*

Method

Sample

We conducted a two-wave online panel survey before the Austrian National Election in 2019. Respondents were recruited by Dynata based on quotas for age, gender, and education. Wave 1 (W1) was conducted in the field between July 24 and August 6, 2019, with 1,105 respondents finishing the survey (1,206 started the survey). Wave 2 (W2) was administered between September 13 and September 21, 2019. Of the 609 participants that started the survey, 564 completed it. Forty respondents were excluded because they took less than 10 minutes for the 25-minute-long survey (i.e., speeders). Additionally, we removed 93 individuals reporting that they did not use social media. We did not recode these responses to active or passive social media use of "1" ("never") because these people did not use social media at all. Yet there is a qualitative difference between not using social media at all and not using social media for political purposes. We excluded another 25 respondents due to missing values which left us with $N = 406$ cases. Our sample was 48.28% male, and on average $M = 47.08$ ($SD = 15.26$) years old. The sample was slightly more educated than the general Austrian population (41.13% did not have a high-school diploma, 14.04% had a

high-school diploma, and 44.83% had more than a high-school diploma). The data and analysis scripts can be found online (https://osf.io/ym4ju/).

<div align="center">***Measures***</div>

Affective Polarization

In a two-party system such as in the United States, affective polarization is typically measured by asking individuals to rate both major parties on a scale from 0 ("cold") to 100 ("warm") on a so-called feeling thermometer (Iyengar et al., 2012). Affective polarization is then operationalized as the distance between both ratings. Consequently, individuals that strongly favor one party and strongly reject the opposing party score highest on the index of affective polarization. While also different measurement instruments, for example, social distance indices, can be used to capture affective polarization, these ask about specific behaviors, while feeling thermometers capture "general attitudes about broad objects (i.e., parties)" (Druckman & Levendusky, 2019, p. 116). Since the latter more strongly aligns with our research goal, we relied on feeling thermometers.

Our operationalization differs from conventional measures of affective polarization in two ways: First, prior studies asked individuals about their evaluation of parties more broadly (Iyengar et al., 2012). This approach has been criticized since respondents could think of either party elites or voters of the party when answering the question, possibly introducing measurement error (Druckman & Levendusky, 2019). Therefore, we distinguish between individuals' assessment of (i) politicians from a party ("How would you rate the politicians of the following parties?") and (ii) voters from a party ("How would you rate the voters of the following parties?"). Thus, we capture two different dimensions of affective polarization, that is, individuals' dislike toward elites of other parties as well as their dislike toward voters of other parties as opposed to their own party.

Second, we adapted the calculation of affective polarization to fit the multiparty context in the country under investigation. Our operationalization was based on Reiljan (2020) who took vote shares of the out-parties into account. We calculated the distance scores between the highest rating and all other ratings on the feeling thermometers for politicians of each party. To give an example, when politicians in party A were assessed most positively, we calculated the distance between the ratings of politicians of party A and politicians of party B, the distance between ratings of politicians of party A and party C, and so on. Next, we calculated the average of all distance scores. Thus, affective polarization is highest when individuals strongly favor politicians from one party but strongly reject politicians from all other parties. The same procedure was applied to calculate affective polarization in the assessment of voters. According to this logic, a person exhibits the highest degree of affective polarization in strongly favoring one party and rejecting all other parties. Notably, in a multiparty system, there are more than two camps. If a person rejects all parties, that person rejects all existing camps. This is arguably the most extreme position one can have. Due to a

sufficiently high correlation (Pearson's r_{W1} = .76, Pearson's r_{W2} = .77), both variables were averaged to a combined index of affective polarization (M_{W1} = 40.12, SD_{W1} = 20.00; M_{W2} = 40.54, SD_{W2} = 19.60).[1]

Passive Political Social Media Use

To assess passive political social media use, we asked respondents how often they used social media such as Facebook, Instagram, Twitter, or YouTube to inform themselves about (a) "party politics and elections" and (b) "political topics in general" on a scale from "1 = never" to "7 = very often." The two items were averaged (M_{W1} = 3.33, SD_{W1} = 1.94, Pearson's r_{W1} = .93; M_{W2} = 3.38, SD_{W2} = 1.95, Pearson's r_{W2} = .94).

Active Political Social Media Use

As with passive political social media use, we used two items to measure active political social media use. Respondents were asked how often they shared, posted, or commented on social media such as Facebook, Instagram, Twitter, or YouTube about (a) "party politics and elections" and (b) "political topics in general." The two items were measured on a 7-point scale and averaged (M_{W1} = 2.20, SD_{W1} = 1.70, Pearson's r_{W1} = .96; M_{W2} = 2.25, SD_{W2} = 1.75, Pearson's r_{W2} = .96). For exploratory factor analysis, please see Table A1 in the Appendix under OSF (https://osf.io/ym4ju/).

Control Variables

We controlled for age, gender, education, news use, intentional news avoidance, like-minded discussion, strength of ideology, political interest, general social media use, and social media network size. News avoidance was measured on a 7-point scale from "1 = strongly disagree" to "7 = strongly agree," with the following three items (partially based on Song, Jung, & Kim, 2017): (1) "It is pointless to read the newspaper or watch the news," (2) "I do not want to waste my time reading the newspaper or watching the news," and (3) "I would like to see and read as few news and articles as possible." The three items were averaged (M = 2.68, SD = 1.60, Cronbach's a = 0.90). We assessed news use by asking the respondents "How many days do you use the following media outlets online or offline to inform yourself about political topics in an average week?" Tabloid news use was measured by using one item (M = 3.16, SD = 2.27) for "free tabloid press" (e.g., *heute*, *Österreich*, oe24.at, heute.at) and one item (M = 2.91, SD = 2.44) for the tabloid newspaper *Kronen Zeitung*, which is the most-read newspaper in Austria and has a large market share in comparison with other European media markets (Trilling & Schoenbach, 2013). We also had two measures for quality news use. We asked respondents how often they used public broadcasting (i.e., the channel "ORF"; M = 4.96, SD = 2.50) and quality newspapers (M = 4.57, SD = 2.71). Like-minded discussion was measured with three items (M = 3.36, SD = 1.78, Cronbach's a = 0.95, based on Campbell & Kwak, 2011). To assess participants' strength of ideology, we first asked them to rate their political views on a 10-point scale from "1 = right" to "10 = left" and then folded the answer categories (M = 1.66, SD = 1.33). For political interest, we asked respondents how strongly they agreed with the following two items on a 7-

---

[1] We also tested the robustness of our findings by changing the operationalization of affective polarization. A variable measuring the difference between the highest-rated and the lowest-rated politicians and their respective voter groups was calculated and used in all analyses to check the robustness. None of the findings changed.

point scale from "1 = strongly disagree" to "7 = strongly agree": (1) "I am very interested in politics," and (2) "Politics is an exciting topic for me." The two items were averaged (M = 4.62, SD = 1.88, Pearson's r = .90). We controlled for general social media use by asking respondents how often they used "social media (e.g., Facebook, YouTube, Twitter, Instagram)" on a 7-point scale from "1 = never" to "7 = very often" (M = 5.51, SD = 1.66). Social media network size was measured using one item by asking respondents to estimate how many people they were connected with on social media platforms (e.g., Facebook, YouTube, Twitter, Instagram, and Instant Messaging Apps. We provided 13 answer categories ranging from "0" to "more than 1,000" (M = 3.52, SD = 3.32). All control variables were assessed in W1. We present the correlations between core variables and items in Table 1 and in Table A2 in the Appendix under OSF (https://osf.io/ym4ju/).

Table 1. Correlation Table for Core Variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Affective polarization (W1)														
2. Affective polarization (W2)	0.68***													
3. Passive political social media use (W1)	0.27***	0.22***												
4. Passive political social media use (W2)	0.24***	0.24***	0.66***											
5. Active political social media use (W1)	0.25***	0.26***	0.60***	0.51***										
6. Active political social media use (W2)	0.25***	0.25***	0.47***	0.61***	0.71***									
7. Quality press	0.19***	0.15**	0.28***	0.29***	0.25***	0.19***								
8. Public broadcaster	0.12*	0.06	0.19***	0.21***	0.23***	0.20***	0.43***							
9. Free tabloid press	0.06	0.02	0.24***	0.22***	0.18***	0.12*	0.27***	0.19***						
10. Commercial tabloid press (*Krone*)	0.19***	0.12*	0.24***	0.29***	0.20***	0.24***	0.26***	0.25***	0.43***					
11. News avoidance	−0.12*	−0.17***	−0.11*	−0.19***	−0.06	−0.11*	−0.37***	−0.37***	−0.17***	−0.20***				
12. Political interest	0.22***	0.20***	0.45***	0.49***	0.38***	0.36***	0.47***	0.45***	0.23***	0.27***	−0.48***			
13. Strength of ideology	0.30***	0.29***	0.18***	0.16**	0.17***	0.14**	0.10*	0.00	−0.04	−0.07	−0.13*	0.15**		

14. Like-minded discussion	0.31***	0.27***	0.41***	0.37***	0.39***	0.40***	0.33***	0.26***	0.19***	0.21***	−0.25***	0.44***	0.28***	
15. General social media use	0.08	0.09	0.39***	0.31***	0.26***	0.23***	−0.03	−0.12*	0.05	0.00	0.04	0.00	0.03	0.09

Note. Pearson's r; *** $p < .001$; ** $p < .01$; * $p < .05$.

Results

We ran ordinary least-squares regressions with auto-regressive terms. The models are presented in Table 2. In H1, we expected that (a) active and (b) passive political social media use are associated with more affective polarization over time. Indeed, in support of H1a, we found that active political social media use was related to increased affective polarization over time ($b = 1.47$, $p = .007$). Passive political social media use was not related to affective polarization over time ($b = -0.44$, $p = .397$). H1b was rejected.

Table 2. Auto-Regressive Regression for Affective Polarization and News Avoidance.

	Affective Polarization (W2)	Passive Social Media Use (W2)	Active Social Media Use (W2)
(Intercept)	25.22 (5.34)***	−0.11 (0.53)	−0.28 (0.46)
Affective polarization	0.62 (0.04)***	0.00 (0.00)	0.00 (0.00)
Passive political social media use	−0.44 (0.52)	0.40 (0.05)***	−0.02 (0.04)
Active political social media use	1.47 (0.54)**	0.15 (0.05)**	0.64 (0.05)***
Control variables			
Quality press	0.07 (0.32)	0.01 (0.03)	−0.04 (0.03)
Public broadcaster	−0.48 (0.35)	−0.00 (0.03)	−0.01 (0.03)
Free tabloid press	−0.33 (0.35)	0.00 (0.03)	−0.05 (0.03)
Commercial tabloid press	0.05 (0.34)	0.09 (0.03)*	0.07 (0.03)*
News avoidance	−1.31 (0.53)*	−0.01 (0.05)	−0.02 (0.05)
Age	−0.10 (0.05)	−0.00 (0.01)	0.00 (0.00)
Gender (ref. = female)	−1.14 (1.48)	−0.10 (0.15)	0.18 (0.13)
Intermediate education (ref. = low education)	−2.70 (2.21)	−0.07 (0.22)	0.03 (0.19)
Higher education (ref. = low education)	−3.95 (1.60)*	−0.16 (0.16)	−0.09 (0.14)
Political interest	0.23 (0.53)	0.23 (0.05)***	0.07 (0.05)
Strength of ideology	0.95 (0.59)	0.03 (0.06)	−0.00 (0.05)
Like-minded discussion	0.13 (0.48)	0.01 (0.05)	0.12 (0.04)**
General social media use	−0.08 (0.50)	0.13 (0.05)*	0.07 (0.04)
Social media network size	0.01 (0.22)	−0.00 (0.02)	0.01 (0.02)
R^2	0.51	0.51	0.55
Adj. R^2	0.49	0.49	0.53
Num. obs.	406	406	406

Ordinary least-squares regression, standard errors in parentheses. All predictor variables were assessed in W1. *** $p < .001$; ** $p < .01$; * $p < .05$.

In H2, we expected that active political social media use increases affective polarization more than passive political social media use. In Table 1, we see that the unstandardized coefficient for active political social media use is larger than the one for passive political social media use. To test the hypothesis, we estimated an additional model for which we added a constraint that the estimate for passive and active

political social media use had to be equal. We compared the model fit with a likelihood ratio test. In line with H2, the first model (presented in Table 1) had a better model fit than the constrained model (χ^2 = 4.92, p = .026).

In H3, we asked/expected that affective polarization is related to more active or more passive political social media use over time. In Table 1, we report that affective polarization did not predict active (b = 0, p = .413) or passive (b = 0, p = .868) political social media use over time. Thus, while active political social media use is associated with more affective polarization, affective polarization does not increase active political social media use. In short, there is no evidence for reciprocal effects.

As the next step to investigate RQ1, we tested whether affective polarization is related to active and passive political social media use over time differently. For this analysis, we estimated both regression equations predicting active and passive political social media use simultaneously (maximum likelihood estimation). We then compared this model with a constrained model in which the coefficients for affective polarization were set to be equal. The coefficients did not differ significantly (χ^2 = 0.30, p = .587).

Turning to some of the controls, we noticed that none of the four media use variables was related to affective polarization over time (free tabloid press: b = −0.33, p = .355, reading *Kronen Zeitung*: b = 0.05, p = .887, quality press: b = 0.07, p = .834, public broadcasting services: b = −0.48, p = .171). Notably, we found that news avoidance reduces affective polarization significantly (b = −1.31, p = .014).

In additional analyses, we checked the robustness of the findings. We ran a model that includes all variables, also taking into account the concurrent relationships at W2. That is, we entered the effects of active and passive use at W2 on affective polarization at W2. The findings replicate: The path of active political social media use at W1 on affective polarization at W2 was significant (b = 1.38, p = .03). Passive political social media use at W1 was not related to affective polarization over time (b = −0.83, p = .125). Also, active social media use at W2 (b = −0.05, p = .94) as well as passive social media use at W2 (b = 0.72, p = .18) were unrelated to affective polarization at W2. In another model, we reversed the direction between the W2 dependent variables, which did not significantly change the findings. In a third model, we measured the relationships among the W2 variables as a correlation among measurement errors. Again, we replicated the path of active political social media use at W1 on affective polarization over time (b = 1.45, p = .005), with no substantial changes with respect to all other paths.

Discussion

There is great agreement among communication scholars that affective polarization can be disadvantageous to democracy as it can lead to a tribalization of the public sphere by separating citizens into camps, leading to distrust and hostility. A look at the origins of affective polarization shows that great attention has been paid to social media. The overarching idea is that social media create networks of like-minded people so the awareness and tolerance of counter-attitudinal views are hampered. In this article, we set out to revisit this idea. But rather than treating social media use as a generic category, we theorized that the ways in which we use social media matter for the emergence of affective polarization. We used the widely established distinction between active and passive social media use (Burke et al., 2010; Stevic et al.,

2021; Trifiro & Gerson, 2019; Verduyn et al., 2017), which, surprisingly, has not yet been considered in research on affective polarization. Using two-wave panel data, our findings suggest that only active political use of social media fosters affective polarization, passive use, by contrast, does not.

By measuring social media use in a more nuanced way (active vs. passive), this study makes an original contribution, showing that different forms of social media use may lead to different political outcomes, in this case, varying degrees of affective polarization. This finding can be explained, first, by the increased amount of cognitive elaboration that comes with active political social media use. Such cognitive elaboration is likely to make individuals aware of their likes and dislikes, potentially fostering affective polarization. Second, the finding can be explained in terms of the psychological effects of expression, which is triggered by active political social media use (see Pingree, 2007). Expression strengthens individuals' political self-concepts, fueling affective polarization. Interestingly, an additional exploratory analysis did not reveal evidence for reciprocal effects. Affective polarization was not related to more active (or passive) political social media use over time. Even though we employed panel data, we cannot draw strict causal conclusions from these findings. But it seems that active political social media use is more likely to lead to affective polarization over time than the other way around. Additional research, especially experimental designs, is needed to clarify these relationships. In particular, it would be interesting to formally test the theoretical premises of the RSM (Slater, 2007) and the revised communication mediation model (Shah et al., 2017) in the context of affective polarization and political active versus passive social media use in a panel design with at least three waves.

Interestingly, passive political social media use was not related to affective polarization over time, corroborating earlier findings from panel studies (Kubin & von Sikorski, 2021). That is, merely passively following political information on social media does not automatically lead to polarization. Moreover, future research might build on this study and analyze how moderators regarding content, platform, and recipients might interact with active and passive political social media use on affective polarization. From a psychological perspective, of course, any piece of information has the potential to polarize affectively. Yet this may depend on additional factors, such as motivated reasoning (Nir, 2011). More specifically, it can be argued that defense-oriented (directional) processing goals are likely increasing affective polarization in response to (social) media content. The reason behind this is that such defense-motivated goals lead people to reject disconfirming information, steering information processing toward desirable outcomes, thereby increasing affective processes. However, more evidence is needed to corroborate these claims.

Regarding the controls, we found that traditional media sources, quality or tabloid, were completely unrelated to affective polarization over time. Furthermore, news avoidance was negatively associated with affective polarization over time. This suggests that actively tuning out news makes it less likely to become negatively aroused, making depolarization likely. When avoiding the news, individuals are neither reminded about their in-group status nor do they see or read arousing information put forth by the out-group. As a consequence, negative affect toward the out-group is not activated, making it less accessible over time. There was no indication of reciprocal relationships: The affectively polarized were not less likely to avoid the news. Again, although this can be treated as a hint toward directionality, strictly causal research designs are needed to replicate these findings.

Limitations

As always, there are some important limitations. We used self-reported items to measure media use and affective polarization. Based on Reiljan's (2020) work and considering the party structure in the country under study, we operationalized affective polarization in a multiparty context, assuming the highest degree of affective polarization when a person strongly favors one party and rejects all the others. Future research should replicate this finding in two-party contexts and use alternative measures. Besides biases due to social desirability, our data could be biased due to individuals' distorted perceptions of their own news consumption. For instance, individuals' perceptions that they avoid news may not automatically indicate a low news consumption overall. However, the most important news sources were included in the statistical model. Nevertheless, the findings of this study must be interpreted with caution.

We also offered two explanations for why active political social media use may drive affective participation. Yet the precise psychological mechanism behind the relationship could not be measured, as in any survey research. Thus, the underlying mechanisms need to be measured and tested, for instance, in experimental settings. Related to that, one could theorize that individuals with more extreme attitudes are particularly engaging in active discussions on social media, so perhaps ideological extremity is the driving factor leading to polarization, not active social media use. Ruling out this alternative explanation, we found that ideology strength predicted neither active and passive political social media use nor polarization.

Additionally, the use of two-wave panel data does not allow us to draw conclusions about causal effects and intraindividual change. With two measurement points, we cannot rule out reverse causality concerns. Panel models that require at least three waves, such as the random intercepts cross-lagged panel model, are warranted to investigate intraindividual change as well as formal testing of dynamic relationships over time (e.g., Hamaker, Kuiper, & Grasman, 2015; Thomas, Shehata, Otto, Möller, & Prestele, 2021). Our findings thus need to be replicated within experimental settings and, ideally, also with panel data employing more than two-panel waves. Finally, macro-level factors as well as media system factors may greatly matter for the emergence of affective polarization. Our findings, therefore, need to be replicated in different national settings, in and outside election contexts.

Conclusion

With respect to affective polarization, our findings support the argument that social media are neither unconditionally detrimental nor beneficial for society and democracy. It depends on *how* social media are used. Social media use can polarize, when citizens share, post, or comment about politics on Facebook, Instagram, Twitter, or YouTube. But the passive reception of political information on social media alone is, according to our findings, without significant consequences for affective polarization. Furthermore, the consequences of affective polarization for active and passive social media use may be less strong than previously thought.

References

Abramowitz, A., & Saunders, K. (2008). Is polarization a myth? *The Journal of Politics, 70*(2), 542–555. doi:10.1017/S0022381608080493

Bakshy, E., Messing, S., & Adamic, L. A. (2015). Exposure to ideologically diverse news and opinion on Facebook. *Science, 348*(6239), 1130–1132. doi:10.1126/science.aaa1160

Banks, A., Calvo, E., Karol, D., & Telhami, S. (2021). #PolarizedFeeds: Three experiments on polarization, framing, and social media. *The International Journal of Press/Politics, 26*(3), 609–634. doi:10.1177/1940161220940964

Banschick, M. R., & Banschick, J. S. (2003). Children in cyberspace. In L. Shyles (Ed.), *Deciphering cyberspace: Making the most of digital communication technology* (pp. 159–199). Thousand Oaks, CA: SAGE.

Beam, M. A., Hutchens, M. J., & Hmielowski, J. D. (2018). Facebook news and (de)polarization: Reinforcing spirals in the 2016 U.S. election. *Information, Communication & Society, 21*(7), 940–958. doi:10.1080/1369118X.2018.1444783

Billig, M., & Tajfel, H. (1973). Social categorization and similarity in intergroup behaviour. *European Journal of Social Psychology, 3*(1), 27–52. doi:10.1002/ejsp.2420030103

Bogardus, E. S. (1947). Measurement of personal-group relations. *Sociometry, 10*(4), 306–311. doi:10.2307/2785570

Burke, M., Marlow, C., & Lento, T. (2010). Social network activity and social well-being. In *Proceedings of the 28th International Conference on Human Factors in Computing Systems—CHI '10*, 1909–1912. doi:10.1145/1753326.1753613

Campbell, S. W., & Kwak, N. (2011). Mobile communication and civil society: Linking patterns and places of use to engagement with others in public. *Human Communication Research, 37*(2), 207–222. doi:10.1111/j.1468-2958.2010.01399.x

Carlin, R. E., & Love, G. J. (2018). Political competition, partisanship and interpersonal trust in electoral democracies. *British Journal of Political Science, 48*(1), 115–139. doi:10.1017/S0007123415000526

Chaiken, S., & Yates, S. (1985). Affective-cognitive consistency and thought-induced attitude polarization. *Journal of Personality and Social Psychology, 49*(6), 1470–1481. doi:10.1037/0022-3514.49.6.1470

Chen, M. K., & Rohla, R. (2018). The effect of partisanship and political advertising on close family ties. *Science, 360*(6392), 1020–1024. doi:10.1126/science.aaq1433

Cho, J., Ahmed, S., Keum, H., Choi, Y. J., & Lee, J. H. (2018). Influencing myself: Self-reinforcement through online political expression. *Communication Research, 45*(1), 83–111. doi:10.1177/0093650216644020

Dubois, E., & Blank, G. (2018). The echo chamber is overstated: The moderating effect of political interest and diverse media. *Information, Communication & Society, 21*(5), 729–745. doi:10.1080/1369118X.2018.1428656

Druckman, J. N., & Levendusky, M. S. (2019). What do we measure when we measure affective polarization? *Public Opinion Quarterly, 83*(1), 114–122. doi:10.1093/poq/nfz003

Druckman, J. N., Klar, S., Krupnikov, Y., Levendusky, M., & Ryan, J. B. (2020). How affective polarization shapes Americans' political beliefs: A study of response to the COVID-19 pandemic. *Journal of Experimental Political Science, 8*(3), 223–234. doi:10.1017/XPS.2020.28

Druckman, J. N., Klar, S., Krupnikov, Y., Levendusky, M., & Ryan, J. B. (2021). Affective polarization, local contexts and public opinion in America. *Nature Human Behaviour, 5*(1), 28–38. doi:10.1038/s41562-020-01012-5

Fiorina, M., Abrams, S., & Pope, J. (2008). Polarization in the American public: Misconceptions and misreadings. *The Journal of Politics, 70*(2), 556–560. doi:10.1017/S002238160808050X

Frison, E., & Eggermont, S. (2016). Exploring the relationships between different types of Facebook use, perceived online social support, and adolescents' depressed mood. *Social Science Computer Review, 34*(2), 153–171. doi:10.1177/0894439314567449

Gainous, J., Abbott, J. P., & Wagner, K. M. (2021). Active vs. passive social media engagement with critical information: Protest behavior in two Asian countries. *The International Journal of Press/Politics, 26*(2), 464–483. doi:10.1177/1940161220963606

Garrett, R. K. (2013). Selective exposure: New methods and new directions. *Communication Methods and Measures, 7*(3–4), 247–256. doi:10.1080/19312458.2013.835796

Garrett, R. K., Carnahan, D., & Lynch, E. K. (2013). A turn toward avoidance? Selective exposure to online political information, 2004–2008. *Political Behavior, 35,* 113–134. doi:10.1007/s11109-011-9185-6

Hamaker, E. L., Kuiper, R. M., & Grasman, R. P. P. P. (2015). A critique of the cross-lagged panel model. *Psychological Methods, 20*(1), 102–116. doi:10.1037/A0038889

Harel, T. O., Jameson, J. K., & Maoz, I. (2020). The normalization of hatred: Identity, affective polarization, and dehumanization on Facebook in the context of intractable political conflict. *Social Media + Society, 6*(2), 1–10. doi:10.1177/2056305120913983

Heiss, R., von Sikorski, C., & Matthes, J. (2019). Populist Twitter posts in news stories: Statement recognition and the polarizing effects on candidate evaluation and anti-immigrant attitudes. *Journalism Practice, 13*(6), 742–758. doi:10.1080/17512786.2018.1564883

Hong, S., & Kim, S. H. (2016). Political polarization on Twitter: Implications for the use of social media in digital governments. *Government Information Quarterly, 33*(4), 777–782. doi:10.1016/j.giq.2016.04.007

Hutchens, M. J., Hmielowski, J. D., & Beam, M. A. (2019). Reinforcing spirals of political discussion and affective polarization. *Communication Monographs, 86*(3), 357–376. doi:10.1080/03637751.2019.1575255

Iyengar, S., & Krupenkin, M. (2018). The strengthening of partisan affect. *Political Psychology, 39*(S1), 201–218. doi:10.1111/pops.12487

Iyengar, S., Lelkes, Y., Levendusky, M., Malhotra, N., & Westwood, S. J. (2019). The origins and consequences of affective polarization in the United States. *Annual Review of Political Science, 22*(1), 129–146. doi:10.1146/annurev-polisci-051117-073034

Iyengar, S., Sood, G., & Lelkes, Y. (2012). Affect, not ideology: A social identity perspective on polarization. *Public Opinion Quarterly, 76*(3), 405–431. doi:10.1093/poq/nfs038

Kim, Y., & Kim, Y. (2019). Incivility on Facebook and political polarization: The mediating role of seeking further comments and negative emotion. *Computers in Human Behavior, 99*, 219–227. doi:10.1016/j.chb.2019.05.022

Kobayashi, T. (2020). Depolarization through social media use: Evidence from dual identifiers in Hong Kong. *New Media & Society, 22*(8), 1339–1358. doi:10.1177/1461444820910124

Kubin, E., & von Sikorski, C. (2021). The role of (social) media in political polarization: A systematic review. *Annals of the International Communication Association, 45*(3), 188–206. doi:10.1080/23808985.2021.1976070

Lane, D. S., Lee, S. S., Liang, F., Kim, D. H., Shen, L., Weeks, B. E., & Kwak, N. (2019). Social media expression and the political self. *Journal of Communication, 69*(1), 49–72. doi:10.1093/joc/jqy064

Lee, S., Rojas, H., & Yamamoto, M. (2022). Social media, messaging apps, and affective polarization in the United States and Japan. *Mass Communication and Society, 25*(5), 673–697. doi:10.1080/15205436.2021.1953534

Lelkes, Y. (2016). Mass polarization: Manifestations and measurements. *Public Opinion Quarterly, 80*(S1), 392–410. doi:10.1093/poq/nfw005

Levendusky, M. S. (2018). When efforts to depolarize the electorate fail. *Public Opinion Quarterly, 82*(3), 583–592. doi:10.1093/poq/nfy036

Marchal, N. (2022). "Be nice or leave me alone": An intergroup perspective on affective polarization in online political discussions. *Communication Research, 49*(3), 376–398. doi:10.1177/00936502211042516

Martini, S., & Torcal, M. (2019). Trust across political conflicts: Evidence from a survey experiment in divided societies. *Party Politics, 25*(2), 126–139. doi:10.1177/1354068816685933

Mason, L. (2018). *Uncivil agreement: How politics became our identity*. Chicago, IL: The University of Chicago Press.

Matthes, J. (2013). The affective underpinning of hostile media perceptions: Exploring the distinct effects of affective and cognitive involvement. *Communication Research, 40*(3), 360–387. doi:10.1177/0093650211420255

Matthes, J., & Beyer, A. (2017). Toward a cognitive-affective process model of hostile media perceptions: A multi-country structural equation modeling approach. *Communication Research, 44*(8), 1075–1098. doi:10.1177/0093650215594234

Matuszewski, P., & Szabó, G. (2019). Are echo chambers based on partisanship? Twitter and political polarity in Poland and Hungary. *Social Media + Society, 5*(2), 1–14. doi:10.1177/2056305119837671

Nir, L. (2011). Motivated reasoning and public opinion perception. *Public Opinion Quarterly, 75*(3), 504–532. doi:10.1093/poq/nfq076

Nordbrandt, M. (2021). Affective polarization in the digital age: Testing the direction of the relationship between social media and users' feelings for out-group parties. *New Media & Society*. Advance online publication. doi:10.1177/14614448211044393

Osmundsen, M., Bor, A., Vahlstrup, P., Bechmann, A., & Petersen, M. (2021). Partisan polarization is the primary psychological motivation behind political fake news sharing on Twitter. *American Political Science Review, 115*(3), 999–1015. doi:10.1017/S0003055421000290

Papacharissi, Z. (2002). The virtual sphere. In F. Webster (Ed.), *The information society reader* (1st ed., pp. 379–392). London, UK: Routledge. doi:10.4324/9780203622278-36

Pingree, R. J. (2007). How messages affect their senders: A more general model of message effects and implications for deliberation. *Communication Theory, 17*(4), 439–461. doi:10.1111/j.1468-2885.2007.00306.x

Rathje, S., Van Bavel, J. J., van der Linden, S. (2021). Out-group animosity drives engagement on social media. *Proceedings of the National Academy of Science of the United States of America, 118*(26), 1–9. doi:10.1073/pnas.2024292118

Reiljan, A. (2020). "Fear and loathing across party lines" (also) in Europe: Affective polarisation in European party systems. *European Journal of Political Research, 59*(2), 376–396. doi:10.1111/1475-6765.12351

Schmuck, D., Heiss, R., & Matthes, J. (2020). Drifting further apart? How exposure to media portrayals of Muslims affects attitude polarization. *Political Psychology, 41*(6), 1055–1072. doi:10.1111/pops.12664

Schmuck, D., Karsay, K., Matthes, J., & Stevic, A. (2019). "Looking up and feeling down." The influence of mobile social networking site use on upward social comparison, self-esteem, and well-being of adult smartphone users. *Telematics and Informatics, 42*, 101240. doi:10.1016/j.tele.2019.101240

Shah, D. V., McLeod, M., Rojas, H., Cho, J., Wagner, M. W., & Friedland, L. A. (2017). Revising the communication mediation model for a new political communication ecology. *Human Communication Research, 43*(4), 491–504. doi:10.1111/hcre.12115

Slater, M. D. (2007). Reinforcing spirals: The mutual influence of media selectivity and media effects and their impact on individual behavior and social identity. *Communication Theory, 17*(3), 281–303. doi:10.1111/j.1468-2885.2007.00296.x

Song, H., Jung, J., & Kim, Y. (2017). Perceived news overload and its cognitive and attitudinal consequences for news usage in South Korea. *Journalism & Mass Communication Quarterly, 94*(4), 1172–1190. doi:10.1177/1077699016679975

Stevic, A., Schmuck, D., Matthes, J., & Karsay, K. (2021). "Age matters": A panel study investigating the influence of communicative and passive smartphone use on well-being. *Behaviour & Information Technology, 40*(2), 176–190. doi:10.1080/0144929X.2019.1680732

Stroud, N. J. (2011). *Niche news: The politics of news choice*. New York, NY: Oxford University Press.

Tappin, B. M., & McKay, R. T. (2019). Moral polarization and out-party hostility in the U.S. political context. *Journal of Social and Political Psychology, 7*(1), 213–245. doi:10.5964/jspp.v7i1.1090

Tesser, A., & Conlee, M. C. (1975). Some effects of time and thought on attitude polarization. *Journal of Personality and Social Psychology, 31*(2), 262–270. doi:10.1037/h0076292

Thomas, F., Shehata, A., Otto, L. P., Möller, J., & Prestele, E. (2021). How to capture reciprocal communication dynamics: Comparing longitudinal statistical approaches in order to analyze within- and between-person effects. *Journal of Communication, 71*(2), 187–219. doi:10.1093/joc/jqab003

Trifiro, B. M., & Gerson, J. (2019). Social media usage patterns: Research note regarding the lack of universal validated measures for active and passive use. *Social Media + Society, 5*(2), 1–4. doi:10.1177/2056305119848743

Trilling, D., & Schoenbach, K. (2013). Skipping current affairs: The non-users of online and offline news. *European Journal of Communication, 28*(1), 35–51. doi:10.1177/0267323112453671

Verduyn, P., Ybarra, O., Résibois, M., Jonides, J., & Kross, E. (2017). Do social network sites enhance or undermine subjective well-being? A critical review. *Social Issues and Policy Review, 11*(1), 274–302. doi:10.1111/sipr.12033

Webster, S. W., & Abramowitz, A. I. (2017). The ideological foundations of affective polarization in the U.S. electorate. *American Politics Research, 45*(4), 621–647. doi:10.1177/1532673X17703132

Westwood, S. J., Iyengar, S., Walgrave, S., Leonisio, R., Miller, L., & Strijbis, O. (2018). The tie that divides: Cross-national evidence of the primacy of partyism. *European Journal of Political Research, 57*(2), 333–354. doi:10.1111/1475-6765.12228

Wollebæk, D., Karlsen, R., Steen-Johnsen, K., & Enjolras, B. (2019). Anger, fear, and echo chambers: The emotional basis for online behavior. *Social Media + Society, 5*(2), 1–14. doi:10.1177/2056305119829859

Xenos, M., Vromen, A., & Loader, B. D. (2014). The great equalizer? Patterns of social media use and youth political engagement in three advanced democracies. *Information, Communication & Society, 17*(2), 151–167. doi:10.1080/1369118X.2013.871318

Yarchi, M., Baden, C., & Kligler-Vilenchik, N. (2021). Political polarization on the digital sphere: A cross-platform, over-time analysis of interactional, positional, and affective polarization on social media. *Political Communication, 38*(1–2), 98–139. doi:10.1080/10584609.2020.1785067

Yu, R. P. (2016). The relationship between passive and active non-political social media use and political expression on Facebook and Twitter. *Computers in Human Behavior, 58*, 413–420. doi:10.1016/j.chb.2016.01.019

Zheng, X., & Lu, Y. (2021). News consumption and affective polarization in Taiwan: The mediating roles of like-minded discussion and relative hostile media perception. *The Social Science Journal*. Advance online publication. doi:10.1080/03623319.2021.1933877