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One way or another? Discussion disagreement and attitudinal homogeneity on social networking sites as pathways to polarization in Czechia

Alena Macková, Martina Novotná, Lucie Čejková, and Lenka Hrbková

This study focuses on social networking sites and their role in partisan-based affective polarization and political antagonism. We examine the relationship by testing variables that indicate selective exposure to counter-attitudinal and pro-attitudinal information. The results from Czech survey data (n = 2,792) collected in 2020 show a positive relationship between both perceived discussion disagreement and attitudinal homogeneity of the network to political antagonism, and a positive relationship between the perceived attitudinal homogeneity of the network and affective polarization. The results thus question the existence of a single universal social media use pattern contributing to polarization.

KEYWORDS

Social networking sites; affective polarization; disagreement; political antagonism; negativity; politically motivated unfriending; network homogeneity

Introduction

Many scholars argue that political polarization has been accelerated by ongoing changes within the political information environment, which has become increasingly information-rich and fragmented, and that recent changes have created wide opportunity structures for selective practices regarding media content (Prior, 2007; Skovsgaard, Shehata, & Strömbäck, 2016), especially on social media. However, the evidence that social media operate as a polarizing factor is still unclear and the results are mixed (Kubin & von Sikorski, 2021). Moreover, it seems there can be several plausible mechanisms through which different social media use patterns can contribute to polarization (Ali & Altawil, 2022; Nordbrandt, 2021; Törnberg, 2022).

In this paper, we address the relationship between polarization and the use of social networking sites (SNS). Building on the theory and research of selective exposure, and on the effects of social media use on political polarization, we extend the findings by a) distinguishing among the practices that are related to exposure to disagreement, providing examples of experience with negativity and conflict in cross-cutting discussions, and connecting selective exposure theory to the preference for pro-attitudinal exposure and a homogeneous

information environment; b) testing the relationship with two different approaches to polarization, specifically partisan-based affective polarization and political antagonism; and c) focusing on the under-researched area of the Central and Eastern Europe region (CEE), namely Czechia.

Firstly, according to previous research, practices related to both types of exposure (pro- and counterattitudinal) could possibly lead to different types of polarization (Garrett, 2009; Kubin & von Sikorski, 2021). Thus, on one side, we investigate the effects of perceived discussion disagreement and negativity (i.e., conflict) in cross-cutting discussions on SNS, and, on the other side, we investigate the effects of selective practices, like politically motivated unfriending (as an act of selective avoidance) and the attitudinal homogeneity of SNS.

Secondly, the available comparative research on the character of polarization and its possible sources reveals that the process of polarization substantially differs among countries and that the well-researched United States is, ostensibly, an outlier to some extent (Gidron, Adams, & Horne, 2020; Reiljan, 2020). It reveals that polarization is high in Western democracies with social inequality, high unemployment, and cultural divides (Gidron, Adams, & Horne, 2020). It is also

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relatively strong in the regions of CEE and Southern Europe (Reiljan, 2020). Moreover, in the global context, it is associated with democratic backsliding (Orhan, 2022). Regarding the sources of polarization in individual media practices, findings from outside the U.S. are even more fragmented and ambiguous (Arguedas, Robertson, Fletcher, & Nielsen, 2022). Our study provides data on an under-researched CEE country, Czechia, where the character of polarization differs from the U.S. and several other contested countries: the nature of polarization in Czechia, with its multiparty system and proportional voting system (Gidron, Adams, & Horne, 2020; Reiljan, 2020), seems to be less associated with partisanship or ideologies.

Thirdly, because of the context-based differences in polarization among the countries and the nature of the polarization in Czechia (see Tóth, Mihelj, Štětka, & Kondor, 2022), we examine whether the perceived disagreement in discussions and/or political unfriending and network homogeneity are linked to affective polarization based on the voters' party sympathies. We also examine whether these practices are linked to political antagonism.

Theory and state of art

Affective political polarization

The recent dominant approach toward political polarization emphasizes the gaps in affect and sympathies to political parties rather than ideological divergence (Iyengar, Lelkes, Levendusky, Malhotra, & Westwood, 2019; Iyengar, Sood, & Lelkes, 2012). In the U.S., Democrats increasingly like the Democratic Party, and Democratic voters increasingly dislike the rival Republican party and its voters, and vice versa (Mason, 2018). Comparative research revealed that voters in European multiparty systems are also affectively polarized, especially in CEE and Southern Europe, where several countries face democratic backsliding (Reiljan, 2020; Orhan, 2022). Affective polarization in these countries, however, is more complex, because voters can like and hate multiple parties that are spread across the political space (Wagner, 2021) and, given the nature of party systems with multiple parties and coalitions, they are often affectively polarized toward blocks of parties with similar ideological profiles (Reiljan & Ryan, 2021).

Research suggests that affective polarization can lead to partisan prejudice (Iyengar & Westwood, 2015) and broad politically motivated biases against outparty supporters, even outside the realm of politics (Rudolph & Hetherington, 2021). Politically, affective polarization shapes the attitudes of the toward policies (Druckman, Krupnikov, Levendusky, & Ryan, 2021) and democratic norms (Simonovits, McCoy, & Littvay, 2022).

From polarization to political antagonism

Polarization may exceed dislike and biases among different political camps and their supporters and escalate into a more pernicious form (McCoy & Somer, 2019). Research suggests that affective polarization does not automatically lead to partisan prejudice (Westwood, Peterson, & Lelkes, 2019); however, a more severe form of political antagonism (i.e., a form of political conflict in which people perceive their political outgroups as enemies and illegitimate elements of the polity) may emerge (Mouffe, 2011). Extremely polarized and antagonized individuals tend to dehumanize their opponents and perceive them as less civilized and lacking emotions. Antagonized individuals also behave in ways to deliberately upset their political outgroups and may even support or tolerate political violence (Kalmoe & Mason, 2019). This rejection of political opponents in the form of political antagonism may pose more of a threat to the functioning of democratic institutions (Simonovits, McCoy, & Littvay, 2022).

Affective polarization and politically driven hostilities seem to be associated, to a large extent, with the use of SNS (Lee, Rojas, & Yamamoto, 2022). Recent research suggests that SNS accelerates the sorting of individuals' identities, both political and other types. This leads to more polarization (Törnberg, 2022) because opinions on SNS become less important as opinions and become markers of identity (Törnberg, Andersson, Lindgren, Banisch, & Mahmoud, 2021). We explore the SNS practices that have the potential to contribute to both affective polarization toward political parties and affective polarization toward the antagonization of social conflict.

Polarization in Czechia

We test the effects of SNS use on polarization in the Czechia, which is a country with unstable and fragmented party system and shifting political cleavages. Comparative research reveals that, despite the party system fragmentation and voter volatility, Czechia scores high on the affective polarization of voters toward political parties (Orhan, 2022; Reiljan, 2020). However, the nature and sources of this polarization are unclear. While some issues have polarizing potential (e.g., immigration, development of the country after 1989), political attitudes are not clearly distributed around two opposing poles. Public opinion is fragmented into smaller groups regarding various issues (Buchtík, Eichler, Kopečný, Smejkalová, & Uhrová, 2021). The Czech public tends to convert political issues into culture wars between elites and ordinary people, which contributes to an identity-based form of political antagonism (Slačálek, 2021). Identities fueled by populist political actors play a more significant role compared to ideological preferences.

Socio-cultural identity-based conflict has become a dominant axis of electoral politics. Even economic issues, which dominated Czech politics after 1989, have become evaluated through the prism of identity (Vachudova, 2019). Two populist parties, the centrist ANO (Action of Dissatisfied Citizens) and the right-wing SPD (Freedom and Direct Democracy), have become important forces in Czech politics since 2017, which might contribute to group-based polarization by feeding cultural and identity-based conflicts. It suggests that Czech society is polarized, and that identities and politically defined groups are relevant, even though they are not necessarily based only upon a simple partisan divide.

SNS, selectivity, and polarization

Common fears that link the use of SNS with polarization are grounded in the theory of selective exposure (Mutz, 2006; Stroud, 2010), which is defined as the tendency for people to choose and prefer attitude-consistent information. This theory regained attention as the internet and SNS became increasingly important as a source of news and a space for interaction with others - and Czechia

is not an exception in these trends. Whereas television plays an essential role as a source of news, longitudinal data show that the recent prevalence of online media and SNS is growing in importance (Macková, Novotná, Procházková, Macek, & Hrbková, 2021; Newman et al., 2021; Štětka, 2021). In general, the most popular SNS in Czechia is Facebook (70% of the citizens use Facebook). The usage of other SNS compared to Facebook is relatively low - with 11% users of Twitter and 28% users of Instagram (Newman et al., 2021). Furthermore, SNS have become an important space where citizens can be exposed to the opinions of others and where they can form an impression about the beliefs and attitudes of different groups in society by reading and participating in discussions. Yet, the willingness of Czechs to participate in online political discussions is similar to other countries (e.g., Duggan & Smith, 2016), which means relatively low (less than a third of Czech users indicated that they discussed politics on SNS in 2020). More importantly for our research, Czechs often reported unwillingness to engage in discussions with people with different opinions and they tended to avoid disagreement (Macková, Novotná, Procházková, Macek, & Hrbková, 2021). Although the international evidence for whether the overall selectivity is on the rise is mixed (Garrett et al., 2014), there is an agreement that the current high-choice information environment offers more opportunities than ever to select or to avoid information and news based on attitudes, opinions, and other preferences (Skovsgaard, Shehata, & Strömbäck, 2016).

Selectivity has often been assessed as partybased, and earlier studies based on the U.S. showed that engagement with partisan news and media can increase both ideological (Stroud, 2010) and affective polarization (Garrett et al., 2014; Iyengar, Sood, & Lelkes, 2012; Lelkes, Sood, & Iyengar, 2017). Studies which reflect countries outside the U.S. and emphasize more attitudebased selectivity are not as convincing in the effects on polarization (e.g. Trilling, van Klingeren, & Wojcieszak Tsfati, 2017; et Additionally, ideological selective exposure was often researched in countries with a more polarized media environment and with more opportunity structures for selective exposure (Skoric, Zhu, KocMichalska, Boulianne, & Bimber, 2021; Steppat, Castro Herrero, & Esser, 2021). Compared to other countries (even in the CEE region), the Czech information environment and audiences are not very polarized, and the level of general selective exposure seems to be low because most of the dominant media is right-centrist and strong partisan media are absent (Fletcher, Cornia, & Nielsen, 2020; Tóth, Mihelj, Štětka, & Kondor, 2022). As a result, our study understands selectivity to be a more general concept that reaches beyond a strictly partisan-based practice, because the Czech partisan attachments

Furthermore, Steppat, Castro Herrero, and Esser (2021) reveal that selective exposure is slightly more frequent among social media users than among the users of TV, radio, and newspapers. Still, recent evidence about the relationship between the use of SNS and polarization (Kubin & von Sikorski, 2021) is fragmented and the results vary (for the review, see Arguedas, Robertson, Fletcher, & Nielsen, 2022; Kubin & von Sikorski, 2021). For example, Cho, Ahmed, Kerum, Choi, and Lee (2018) used U.S. data to show that political expression on social media predicts both ideological and affective polarization, and Lee, Rojas, and Yamamoto (2022) found a positive relationship between social media news use and affective polarization in both the U.S. and Japan. On the other hand, other studies found only small or no effects of social media use (Ali & Altawil, 2022; Nordbrandt, 2021), and even a negligible depolarizing effect of social media use for news (Beam, Hutchens, & Hmielowski, Johnson, Neo, Heinen, Smits, & van Veen, 2020). Overall, the link between SNS use and polarization is mostly expressed by a concern with the creation of an ideologically homogeneous information environment (due to growing selectivity) or to a more hostile ideologically diverse environment (Flaxman, Goel, & Rao, 2016) - both, possibly, directly lead to polarization as a distinct mechanism. Due to these uncertain effects of general SNS use identified by previous research in Czechia, we investigate the effects of more clearly defined SNS practices (among SNS users).

Perceived discussion disagreement and negativity

Our first set of hypotheses is linked to the assumption that SNS can create an ideologically diverse information environment where users are often exposed to different content and views and where they may interact with those who hold dissimilar views. Additionally, users do not necessarily need to discuss politics to be exposed to counter-attitudinal content because they can just scroll through their the SNS feeds (Yang, Barnidge, & Rojas, 2017) and be exposed accidentally (see Weeks et al., 2017). The impacts of counter-attitudinal exposure on SNS can generally be twofold. On the one hand, prior research has shown that such exposure can increase tolerance to others and their opinions (Mutz, 2006) and depolarize attitudes (Westerwick, Johnson, & Knobloch-Westerwick, 2017). Contrary to the optimistic assumptions, counter-attitudinal exposure can increase perceived social distance, reinforce attitudes, and contribute to polarization (Duggan & Smith, 2016; Flaxman, Goel, & Rao, 2016; Iyengar, Sood, & Lelkes, 2012; Suhay, Bello-Pardo, & Maurer, 2018). Furthermore, some research shows no, poor, or mixed evidence (Lee, Choi, Kim, & Kim, 2014).

One of the main factors that contributes to polarization may not be primarily linked to counter-attitudinal exposure as such, but rather to the character of the content and of the interactions. Online discussions tend to be negative, uncivil, and offensive. Hostility is often used as a reaction to counter-attitudinal opinions (Vochocová, 2020) and can consequently lead to selective behavior (Goyanes, Borah, & Gil De Zúñiga, 2021). Many users find such interactions and exposure to disagreement to be stressful, and they get angry (Macková, Novotná, Procházková, Macek, & Hrbková, 2021). Negative language and hostile content can be problematic from the perspective of out-group beliefs (Hiaeshutter-Rice & Hawkins, 2022). As a result, such exposure can potentially shape behavior and attitudes (Weber, Viehmann, Ziegele, & Schemer, 2020; Winter & Krämer, 2016). It can generate anger and hostility, underline group differences (Druckman, Gubitz, Levendusky, & Lloyd, 2019), strengthen prior convictions and ingroup attachments, and increase polarization

(Anderson, Yeo, Brossard, Scheufele, & Xenos, 2018; Hwang, Kim, & Huh, 2014).

The term negativity captures a range of forms of hostility in communication. Whereas some researchers define negativity as a part of incivility (see Hameleers et al., 2022), it is apparent that negativity is a broader concept and may occur in civil and uncivil ways contrary to incivility (see Otto et al., 2020). "Negativity" allows for the capture of a broader spectrum of adverse reactions that might be harmful. Counterarguments and "comment wars" are, from the point of view of discussion participants, mentioned as negative aspects of socialmedia discussions (Kruse et al., 2018). Both negative civil criticism and incivility need to be considered. Available data show that hateful comments and a negative tone, even if civil, affect people's attitudes and possibly shape intergroup polarization (Weber, Viehmann, Ziegele, & Schemer, 2020). This counters Brooks and Geer's (2007) argument that negativity is not as problematic as incivility.

We test the effect of perceived discussion disagreement, negativity, and conflict in discussions. We assume that the disagreement in discussions will be related to higher polarization. Moreover, we suppose that the effect will be stronger for users who are also exposed to negativity and conflict. Building on limited evidence, we assume that exposure to disagreement in (negative) cross-cutting discussions can be related to the perceived wider gap between political opponents, and to higher political antagonism.

H1a: Perceived discussion disagreement is linked to higher affective polarization.

H1b: Perceived discussion disagreement is linked to higher political antagonism.

H2a: The effect of perceived discussion disagreement on affective polarization will be stronger among users who have experienced negativity and conflict in discussions.

H2b: The effect of perceived discussion disagreement on political antagonism will be stronger among users who have experienced negativity and conflict in discussions.

Selective avoidance and attitudinal homogeneity on SNS

While SNS can expose citizens to diverse information and motivate them to engage in discussions with people who hold opposing views, they also allow them to establish a more homogeneous information environment through the practices of filtering and content curation on SNS (Skoric, Zhu, & Lin, 2018). Selective avoidance (e.g., content removal or politically motivated unfriending; Skoric, Zhu, Koc-Michalska, Boulianne, & Bimber, 2021; Zhu & Skoric, 2022) provides opportunities to avoid content shared by those with whom they politically disagree (Bode, 2016), and it can be seen as a reaction to the uncivil online environment of SNS (Goyanes, Borah, & Gil De Zúñiga, 2021). On the other hand, engagement with some degree of selective exposure does not necessarily imply engagement in the practices of selective avoidance (Garrett, 2009; Skoric, Zhu, & Lin, 2018; Yang, Barnidge, & Rojas, 2017; Zhu & Skoric, 2022). The use of this selective strategy (around a third of the respondents reported the usage of the unfriending function according to Barnidge, Peacock, Kim, Kim, & Xenos, 2022; Neely, 2021) is influenced by several factors, which may mitigate the final effects of unfriending on a diversity of content on SNS. Specifically, unfriending is more common for politically engaged users with higher exposure to political content, users with stronger political opinions, and those who are more exposed to disagreement (Bode, 2016; Duggan & Smith, 2016; Neely, 2021).

With the general tendency to prefer attitudeconsistent content and news (Stroud, 2010) and the tendency to avoid attitude-discrepant or uncivil content (Garrett, 2009; Kim, Wang, Lee, & Kim, 2022), users of SNS can use strategies of selective avoidance to build a safer and ideologically homogeneous space. Thus, we can understand politically motivated unfriending as a strategy to prevent or reduce engagement with opposite viewpoints (Hwang, Kim, & Huh, 2014). However, Vaccari and Valeriani (2021) argue that it is very difficult to isolate oneself from disagreement. Apart from the active role of SNS users, there is the issue of accidental exposure to news (Vaccari & Valeriani, 2021) and the twofold role of SNS algorithms. The algorithms may break down the homogenous environment and bring up controversial content that gains more attention. Still, on the other side, algorithms contribute to creating a more homogeneous informational environment and they tend to produce "echo chambers." The common concerns connected to the dominance of online "echo chambers," as defined as bounded and enclosed media spaces (Jamieson & Cappella, 2008, p. 76), seem to be unfulfilled (Arguedas, Robertson, Fletcher, & Nielsen, 2022; Garrett, 2009; Vaccari & Valeriani, 2021). In Czechia, the media repertoires of citizens seem to also be relatively balanced (Tóth, Mihelj, Štětka, & Kondor, 2022). The same applies to online news media audiences (Fletcher, Cornia, & Nielsen, 2020) and SNS users (Macková, Novotná, Procházková, Macek, & Hrbková, 2021).

Despite the evidence that most citizens engage, to some degree, in counter-attitudinal exposure, worries about the implications of online selective exposure in terms of polarization remain, because one of the more conclusive findings of the literature on social media and polarization is the positive relationship between pro-attitudinal exposure and polarization (Kubin & von Sikorski, 2021). The information environment in which citizens mainly prefer pro-attitudinal exposure and where they are not much exposed to incongruent information, can magnify the distances among groups with different opinions and strengthen in-group positions and attitudes (Knobloch-Westerwick, Mothes, Johnson, Westerwick, & Donsbach, 2015). Consequently, we assume that politically motivated unfriending is a practice of selective avoidance, and that the level of perceived attitudinal homogeneity will be related both to higher affective polarization and to antagonization in society.

H3a: Politically motivated unfriending is linked to higher affective polarization.

H3b: Politically motivated unfriending is linked to higher political antagonism.

H4a: The perceived attitudinal homogeneity of the network is linked to higher affective polarization.

H4b: The perceived attitudinal homogeneity of the network is linked to higher political antagonism.

Political interest and polarization in high-choice media environment

As mentioned above, the current (online) media environment and SNS offer easier ways than ever before to select or avoid the news, content, and interactions based on individual preferences and characteristics. Nowadays, the role of individual characteristics in news consumption, and especially political interest, is becoming more significant (Skovsgaard, Shehata, & Strömbäck, 2016; Vaccari & Valeriani, 2021). A gap between politically interested and disinterested people is apparent (Prior, 2007, 2013). This might have consequences for political behavior and political attitudes, including polarization. While the current environment allows those with little interest in politics to avoid news or political discussions, it helps people with higher political interest to access political content to have political interactions (Kim, Guess, Nyhan, & Reifler, 2021). In the same vein, studies found that people who are more interested, politically sophisticated, or engaged in politics, are often exposed to more polarizing content (Westfall, Van Boven, Chambers, & Judd, 2015). More importantly, they hold more polarized opinions toward others (Ali & Altawil, 2022; Druckman, Klar, Krupnikov, Levendusky, & Ryan, 2021; Rekker & Harteveld, 2022). Nevertheless, the studies also imply that the relationship between political interest and social media practices is not straightforward. Building on this limited and



mixed evidence, we focus on the relationship between political interest and polarization and hypothesize that, in the recent information environment (and in the case of SNS users), political interest is positively linked to affective polarization and to political antagonism.

H5a: Higher political interest is linked to higher affective polarization.

H5b: Higher political interest is linked to higher political antagonism.

Methodology

Data

We tested the set of hypotheses on the subsample of Czech SNS users (n = 2,792; 74.2%) from a survey of the adult population (N = 3,763) collected by Focus (Marketing & Social Research) agency in November-December 2020. The sample is based on quotas to represent the Czech 18+ population. It was compiled with a combination of computer-assisted web interviewing (65%) and computer-assisted personal interviewing (35%) by professionally trained interviewers. The original questionnaire covers selected political attitudes and values, polarization, attitudes about the media, and trust in detailed news reception practices. The practices used on SNS that were targeted by this paper represent a marginal and supplementary part of the questionnaire. The descriptive statistics and correlations for all of the variables for both the SNS users and the excluded non-SNS users are provided in Supplementary Materials (Table A1).

Measures

Affective polarization captures differences in the evaluations of political parties (Iyengar, Sood, & Lelkes, 2012). Respondents rated their sympathies for all of the political parties represented in the Chamber of Deputies on a 0-10 scale. To operationalize affective polarization in a multiparty system we used an index based on the spread of the party sympathies of individual respondents (Wagner, 2021). This approach recognizes that individuals can hold positive feelings toward more than one party and that a respondent who holds similar positive feelings for most or all of the parties is not affectively polarized. This type of operationalization emphasizes that high affective polarization results from the individual's different levels of party affect across the party spectrum. It also enables us to measure affective polarization for both undecided voters and nonvoters (for details and descriptive statistics see Supplementary Materials Table A1, Figure A1).

Political antagonism was measured as agreement with four statements (on a 5-point agreement scale that ranged from "totally disagree" to "absolutely agree"), which represented diverse domains that were affected by polarization: society, politics, media, and everyday life. Political antagonism includes the statements: "People whose opinions on important issues are opposite to mine can be dangerous for society;" "Politicians whose opinions on important issues are opposite to mine should not be in politics;" "It is not worth following media that have different opinions on important issues than I do;" and "It is not worth being friends with or talking to someone who has opinions that are opposite to mine on important issues" (Cronbach $\alpha = .82$).

Perceived discussion disagreement was measured with a statement (5-point scale that ranged from "completely disagree" to "totally agree"): "There are often discussions or comments on my network that I disagree with." The measure was inspired by a previous study by Lu, Heatherly, and Lee (2016).

Negativity and conflict in discussions was assessed by three items that looked at the perceived and initiated negativity: (1) "I have received a very negative reaction from a friend or from people who follow me on the social networking sites;" (2) "I fight in online discussions with people who have an opinion that is opposite mine;" and (3) "I add negative comments in discussions, including hostile or vulgar words, in answer to comments or posts shared by someone else." Respondents were asked for the frequency of the behavior on a 5-point scale that ranged from "never" to "very often." The score was computed as the mean of the values (Cronbach $\alpha = .84$). The measurement of experienced negativity was derived from the study by Rainie and Smith (2012). Using a broader concept of negativity, rather than only incivility, allows us to capture various attacks from two perspectives, perceived and initiated. As civility differs among the perception of the beholders (Herbst, 2010), this operationalization will enable users to put whatever they might evaluate as a negative reaction, or "fighting," into the concept.

To measure politically motivated unfriending, we asked if the users had ever unfriended someone (i.e., yes/no) for the following political reasons: 1) Did they share something you didn't agree with about politics or public affairs? 2) Did they argue with you or anyone you know about politics or public affairs? 3) Did they disagree with something you shared about politics or public affairs? And 4) Did they share posts about politics or public affairs too often? The score was computed as the sum of the values (Cronbach $\alpha = .79$).

Level of perceived attitudinal homogeneity on SNS was measured as an agreement (5-point scale ranging from "completely disagree" to "totally agree") with the statement: "The vast majority of people on my social networking site have similar views as I do" (see Chen, Ai, & Guo, 2022).

Political interest was measured by the question "How interested are you in politics?" on an 11point scale that ranged from "not interested at all" (0) to "very interested" (10). Control variables include gender, age, and education.

Analysis

We employed a hierarchical multiple regression analysis (IBM SPSS Statistics 27, 28) and a moderation analysis (PROCESS v4.2, Model 1; Hayes, 2022) to test the hypotheses. We began the analysis by exploring the variables and checking the assumptions.

After exploring descriptive statistics and correlations, we transformed the variable of politically motivated unfriending because it violated the assumption of normality (de Vaus, 2002). Thus, politically motivated unfriending (skewness = 1.756, SE = .049; kurtosis = 1.959, SE = .098) was recoded as follows: 0 - never (n = 1,729, 70.0%) and 1 - at least once at some point (n = 742, 30.0%).

In preparation for the moderation analysis, we calculated the mean-centered values of perceived discussion disagreement and negativity, and conflict in discussions, to avoid multicollinearity (Irwin & McClelland, 2001). Afterward, we computed the interaction of these two variables.

We tested two regression models with independent variables and the interaction as predictors. We also tested affective polarization and political antagonism as dependent variables. The independent variables were added in three blocks: (1) control variables; (2) study variables without interaction; and (3) interaction.

In both analyses, the assumption of the absence of multicollinearity was met. Correlations among variables (see Table A1 in Supplementary Materials), VIF, and tolerance had acceptable levels (de Vaus, 2002). We detected some multivariate violations of normality and slight issues with homoscedasticity. Nevertheless, due to having a large sample and having already adjusted one of the variables, we decided to proceed with the analysis. Some cases were removed from the analysis as outliers. After a listwise deletion of missing data, 1,924 cases were tested for affective polarization and 1,965 cases were tested for political antagonism.

Results

The results of a hierarchical regression analysis performed on the sample of interest for this study (i.e., SNS users) showed that political antagonism was better explained by the study variables than affective polarization ($R^2 = .160$ for political antagonism, $R^2 = .120$ for affective polarizations; for detailed results see Table 1).

As shown in Table 1, we did not find a relationship between perceived discussion disagreement and higher affective polarization (H1a; β = .006, p = .801), but those with higher political antagonism had more perceived discussion disagreement (H1b; $\beta = .131$, p < .001).

We also tested whether the effect of perceived discussion disagreement on affective polarization (H2a) and political antagonism (H2b) would be stronger for users who experienced more negativity and conflict in discussions. The interaction effect was insignificant for political antagonism ($\beta = .013$,

Table 1. Results of the hierarchical regression analysis.

| | Affective polarization | | | | | | | | | | Political antagonism | | | | | | | | |
|---|------------------------|----------------|--------|-----------------------|------|--------|----------------------|------|--------|-------------------|----------------------|-----------------------|-------------------|------|---------------------|-------------------|------|--------|--|
| | Block 1 | | | Block 2 | | | Block 3 | | | Block 1 | | | Block 2 | | | Block 3 | | | |
| | b (SE) | β | р | b (SE) | β | p | b (SE) | β | р | b (SE) | β | р | b (SE) | β | р | b (SE) | β | р | |
| Gender | -0.093 (0.054) | 039 | .087 | 0.032 (0.054) | .014 | .551 | 0.028 (0.054) | .012 | .600 | -0.021 (0.039) | 012 | .586 | -0.004 (0.037) | 003 | .904 | -0.004 (0.037) | 002 | .924 | |
| Age | 0.014 (0.002) | .197 | < .001 | 0.010 (0.002) | .144 | < .001 | 0.010 (0.002) | .143 | < .001 | 0.006 (0.001) | .112 | < .001 | 0.007 (0.001) | .128 | < .001 | 0.007 (0.001) | .129 | < .001 | |
| Education | 0.004 (0.030) | .003 | .881 | -0.043 (0.029) | 032 | .140 | -0.043 (0.029) | 032 | .144 | -0.119 (0.021) | 129 | < .001 | -0.067 (0.020) | 072 | .001 | -0.067 (0.020) | 072 | .001 | |
| Perceived discussion disagreement | | | | 0.020 (0.028) | .016 | .470 | 0.007 (0.029) | .006 | .801 | | | | 0.114 (0.019) | .128 | < .001 | 0.117 (0.020) | .131 | < .001 | |
| Experienced negativity and conflict | | | | -0.018 (0.037) | 011 | .636 | -0.002 (0.038) | 001 | .959 | | | | 0.282 (0.026) | .242 | < .001 | 0.279 (0.026) | .240 | < .001 | |
| Politically motivated unfriending | | | | -0.148 (0.057) | 058 | .010 | -0.153 (0.057) | 060 | .008 | | | | 0.135 (0.040) | .074 | .001 | 0.136 (0.040) | .074 | .001 | |
| Level of attitudinal homogeneity | | | | 0.125 (0.029) | .093 | < .001 | 0.131 (0.029) | .098 | < .001 | | | | 0.179 (0.020) | .187 | < .001 | 0.178 (0.020) | .186 | < .001 | |
| Political interest | | | | 0.122 (0.010) | .270 | < .001 | 0.123 (0.010) | .271 | < .001 | | | | -0.022 (0.007) | 069 | .002 | -0.022 (0.007) | 069 | .002 | |
| Perceived discussion disagreement × Experienced negativity and conflict | | | | . , | | | -0.092 (0.040) | 051 | .023 | | | | | | | 0.017 (0.028) | .013 | .535 | |
| R ² (R ² change) F change | | .044 29.114 | | .118 (.074) 32.172 | | | .120 (.002) 5.164 | | | .030 20.116 | | .160 (.130) 60.568 | |) | .160 (.000) .385 | | | | |
| <i>p</i> | | <.001 | | <.001 | | | .023 | | | | <.001 | | <.001 | | | .535 | | | |

Gender was coded as 0 – male and 1 – female. Politically motivated unfriending was coded as 0 – never and 1 – at least once at some point.

p = .535). In the case of affective polarization, the interaction effect was significant and negative, but with the weakest effect among the study variables $(\beta = -.051, p = .023)$. Moreover, when testing for moderation using PROCESS (Model 1, 10000 bootstrap samples), the moderation model, $R^2 = .002$, F(3, 2227) = 1.816, p = .142 and all its terms, tested as insignificant.

We observed that those who performed politically motivated unfriending at least once at some point had higher levels of political antagonism (H3b; β = .074, p = .001). Interestingly, the opposite was true for affective polarization (H3a; $\beta = -.060$, p = .008). Both associations were among the weakest - but still significant - in the model.

For Hypotheses 4a and 4b, we expected that higher levels of the attitudinal homogeneity of the network would be linked to higher affective polarization and political antagonism, respectively. The analysis supported both hypotheses ($\beta = .098$, p < .001; $\beta = .186$, p < .001, respectively), with attitudinal homogeneity being the strongest predictor of political antagonism.

In the case of affective polarization, the relationship with political interest was the strongest and positive (β = .271, p < .001), meaning that SNS users with higher political interest are also more affectively polarized. Thus, we found support for Hypothesis 5a. But for political antagonism, the association was the opposite: weak and negative $(\beta = -.069, p = .002; H5b).$

Additionally, older SNS users scored higher in affective polarization (β = .143, p < .001) and political antagonism (β = .129, p < .001), and those with lower education were more politically antagonized $(\beta = -.072, p < .001).$

Discussion

The study examined the relationship between several SNS practices, political interest and partisanbased affective polarization and political antagonism. We consider the Czech case to be highly interesting and valuable because the countries in the CEE region are not in the spotlight of researchers. Importantly, comparative studies on polarization or the character of SNS use and its effects show the diversity in results and relevance of various contexts (Gidron, Adams, & Horne, 2020; Steppat,

Castro Herrero, & Esser, 2021). Czechia represents a relatively young European democracy with a fragmented and unstable multiparty system and multiple populist parties who play roles in parliamentary politics. While populist political actors have been exploiting identity-based issues, such as immigration and EU, for voter mobilization (Slačálek, 2021), the political system has not been disrupted by the democratic backsliding that is typical for other countries in the region. Similarly, regarding the character of the media environment and its polarization, Czechia does not represent an extreme case, even when compared to other CEE countries (Tóth, Mihelj, Štětka, & Kondor, 2022).

This case study produced several important findings. Firstly, we found that the effects of SNS use differed in some respects for affective polarization and political antagonism. It confirms the need for deeper contextualization with a focus on a clear conceptualization of polarization in order to compare the effects of SNS use in different contexts (Johnson, Neo, Heinen, Smits, & van Veen, 2020; Kubin & von Sikorski, 2021). The only consistent and positive effect on both of the examined dependent variables was found in the case of the perceived attitudinal homogeneity of networks. This is in line with previous research that reported quite reliable results about the effects of the tendency for selectivity and pro-attitudinal exposure on polarization (Knobloch-Westerwick, Mothes, Johnson, Westerwick, & Donsbach, 2015; Kubin & von Sikorski, 2021). The reason for the stronger effect for the political antagonism compared to affective polarization may lie in the construction of the contested variable. Attitudinal homogeneity is assessed as the general agreement in views, and it is not focused on political attitudes or the ideological homogeneity of the network in the sense of the partisanship of friends or followed users. Following the argument about the tendency for pro-attitudinal exposure, we also found weak effects for political unfriending on both dependent variables. Interestingly, their directions are opposite. While political antagonism has a positive effect (similar to attitudinal homogeneity), affective polarization has a negative, albeit small, one. Political unfriending and political antagonism refer to actions that are motivated by counteropinions, whereas affective polarization does not.

It seems that removing friends is connected to more extreme polarization and the active exclusion of "out-groups," which could potentially go further beyond friend removal and result in more serious conflicts. To sum up, political unfriending and attitudinal homogeneity are both connected with higher antagonism against "others." Regarding the opposite relation between political unfriending and affective polarization, it seems that other characteristics probably shape the homogeneous composition of the network, as following like-minded pages that align with the political affiliation and consequently result in affective polarization.

Compared to the tendency for pro-attitudinal exposure, the relationship between polarization and counter-attitudinal exposure was less straightforward in previous research. Consistent with our expectations, we found an effect of perceived disagreement in discussions, although this was only for political antagonism. Additionally, we did not find evidence for the moderating effect of experienced negativity and conflict, though we found that experienced and initiated negativity, or conflicting behavior, has an effect on political antagonism itself. For comparison, the research from the U.S. shows a positive relationship between negativity and perceived polarization (Anderson, Yeo, Brossard, Scheufele, & Xenos, 2018; Hwang, Kim, & Huh, 2014). These discrepancies may be caused by a combination of factors, such as the countryrelated context, the differences within the concept of polarization, and the capture of negativity via an experimental study (Anderson, Yeo, Brossard, Scheufele, & Xenos, 2018). Similarly, the operationalization of the concept in the study can also make a difference, because it specifically combines negativity and conflict. We suggest that future research focus on the survey data and that it should more delicately examine the concept of incivility and more harmful attacks, such as hate speech and intolerance. They should also target the differences among the effects of experienced negativity, initiated negativity, and incivility, which could imply different consequences for polarization.

We also tested the effect of political interest for the case of SNS users on affective polarization and political antagonism. We were interested if and how much political interest was associated with polarization in the current information

environment (Prior, 2007, 2013). While we found a substantial positive effect for affective polarization based on the expression of sympathies or antipathies toward the voters of different parties (in line with expectations and previous research), the effect on political antagonism is surprisingly negative (albeit weak). We understand this crucial difference as being derived from the character and definition of antagonism, which is not necessarily related only to partisan identities, but also to the political issues and the orientation of the politics. As such, political antagonism, in contrast to the concept of affective polarization, is more likely for both people who are more alienated from politics and current affairs and people who are less interested and knowledgeable about politics (and who have lower education).

These results produce three important related ideas. First, it seems that the disagreement between scholars who tend to overestimate the influences of ostensibly contrasting SNS practices related to the fears of the effects of attitudinally homogeneous networks or cross-cutting exposure may be overstated. Our data show that both more ideologically homogeneous networks and perceived discussion disagreement are linked to higher political antagonism, but the effects are moderate or weak. Our second thought is related to political antagonism. We built this concept on the theories of groupbased polarization and the antagonization of political conflicts (McCoy & Somer, 2019). According to our data, the practices on SNS that are related to making distinctions between "us" and "them"like the filtering of friends on the network, engagement in cross-cutting distinctions, and conflict or negativity that often targets specific groups - is linked to the antagonization of society rather than to affective polarization toward political parties in Czechia. We assume that this is the reason that we also identified the effects on both sides of the practices – all of them generally reported the tendency to act in an antagonistic way, even when they were used by most SNS users to varying degrees. Our third limitation considers the way that the direction of the relationships were determined. Since we work with cross-sectional data, it is not advisable for our study to infer any causal effects and their directions (e.g., Spector, 2019). Such an approach can be found in studies that examine the effect of content exposure on polarization with experimental methods or panel data (e.g., Lee, Choi, Kim, & Kim, 2014; Lee, Rojas, & Yamamoto, 2022; Trilling, van Klingeren, & Tsfati, 2017). However, the selected SNS practices investigated in the present study could trigger antagonism and, we cannot rule out the possibility that political antagonism may be the cause, rather than the consequence, of such behavior. This reversed causal pattern would mean that SNS in Czechia simply provides antagonized groups with the space for the expression of polarized behavior.

Besides the issue of causal reasoning, the research has further limitations. Similar to several other studies (Lee, Choi, Kim, & Kim, 2014; Skoric, Zhu, Koc-Michalska, Boulianne, & Bimber, 2021) we rely on self-reported measures, which could be less reliable among different groups of users based on their reflexivity or selfperception. Furthermore, because perceived discussion disagreement and the perceived level of attitudinal homogeneity on SNS were measured by single items in the previous research studies, we suggest that future research implement multiple-item measurements to increase both reliability and validity. Also, our research assesses polarization as a state of public opinion rather than a process (McCoy & Somer, 2019). And, lastly, we do not differentiate among various SNS, though there is evidence that the effects of various SNS can differ (e.g., Yarchi, Baden, & Kligler-Vilenchik, 2021). Additionally, we admit that the use of SNS can be, for many citizens, only one part of their media repertoire (and we are not able to access the role of SNS algorithms). Despite these limitations, we believe that this research enlightens the understanding of SNS practices in Czechia (as the first study to examine the relationship between SNS use and the polarization within the country), but we also believe that it is a contextually interesting case for polarization research in general.

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