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The More, the Merrier…: The Effect of Social Network Heterogeneity on Attitudes Toward Political Opponents

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Abstract

Social network homogeneity is considered one of the key drivers of the rise in affective polarization. As opportunities for contact with different others decrease, out-group animosity increases, fueling political conflict and destabilizing democracy. At the same time, research suggests that diverse social networks foster tolerance for opposing viewpoints. Consistent with the contact hypothesis, empirical studies show that individuals with more politically diverse networks hold more favorable attitudes toward their political opponents. However, it remains unclear whether network heterogeneity affects intergroup relations in the same way as intergroup contact or whether it represents a distinct source of depolarization. Furthermore, there is limited empirical evidence on the psychological mechanisms through which network heterogeneity influences attitudes toward political opponents. In this article, we address these gaps by presenting the results of a 2019 survey study (N = 378) conducted in Poland, within a highly polarized context. We show that having a more heterogeneous social network in terms of partisanship is indirectly related to more positive attitudes toward political opponents—an effect explained sequentially by diminished moral conviction and weakened party identification, as well as by weakened party identification alone. Contrary to what has been assumed, this effect is independent of traditionally operationalized intergroup contact, both in terms of its quantity and quality.

Keywords

affective polarization; moralization; party identification; social networks

1. Introduction

Social scientists have long recognized that our social interactions influence who we are. Studies show that people in our social networks often inform our attitudes and behaviors, affecting various aspects of life such as drinking habits (Borsari & Carey, 2001), cultural preferences (e.g., Duricic et al., 2021), or intergroup attitudes (Bracegirdle et al., 2022; Zingora et al., 2020). The influence of friends, family, and associates is also apparent in politics. Empirical evidence suggests that individuals rarely navigate political engagement alone; instead, they rely on close others to gather information, formulate opinions, and make choices about political matters (e.g., Huckfeldt et al., 2004; Lupton & Thornton, 2017; Sinclair, 2012). Importantly, the partisan composition of one's social network may not only shape political preferences and civic engagement but also offer or deny opportunities for meaningful political discussions with those who hold opposing views, which may further translate into attitudes toward political adversaries in general. Consistent with the contact hypothesis (Allport, 1954), empirical research suggests that individuals with more politically diverse social networks have more favorable attitudes toward their political opponents (de Jong, 2024; Ekstrom et al., 2020; Lee, 2022). At the same time, the psychological processes underlying this relationship have yet to be fully explored. Moreover, it remains unclear whether discussion network heterogeneity—defined as the number of close-tie contacts with opposing views and attitudes with whom an individual discusses important matters (Burt, 1984)—influences intergroup relations in the same way as the distant-tie intergroup contact, as traditionally conceptualized in social psychology (see Wölfer & Hewstone, 2017), or whether it represents a qualitatively distinct source of depolarization (see Facciani & Brashears, 2019).

This article addresses these issues by (a) examining moral conviction and party identification as mediators of the relationship between network heterogeneity and affective polarization and (b) comparing the effects of heterogeneous discussion networks with those of self-reported intergroup contact. We propose that diverse discussion networks reduce affective polarization by mitigating the extent to which people perceive political divides as a matter of morality and by limiting party identification. Furthermore, we argue that this sequential mechanism is more likely to explain the depolarizing effect of heterogeneity within one's immediate social environment than the corresponding effects of extra-network intergroup contact, whether in terms of quality or quantity (Islam & Hewstone, 1993).

To verify our claims, we use data from a representative survey of Poles conducted in 2019. In the following sections, we review the extant literature on the link between network heterogeneity and affective polarization, consider moral convictions and party identification as potential mediators, and reflect on the possibly distinct effects of having close vs. distant associates of different political views. After empirically testing our hypotheses, we conclude by situating the present findings within the existing literature and discussing potential avenues for future research.

2. Social Networks and Affective Polarization

Affective political polarization is defined as a tendency to have a positive view of and strong positive feelings toward one's political allies while having a negative view of and strong negative feelings toward one's political opponents (Iyengar & Westwood, 2015). Unlike ideological polarization, which stems from competing views on political issues, affective polarization is primarily based on social identities (Green et al., 2002; Huddy et al., 2015; Huddy & Yair, 2021). In highly polarized societies, affective polarization may take

the form of out-group dehumanization, i.e., denying full humanness to out-group members and people of different political views (Marchlewska et al., 2024; Martherus et al., 2021; Cassese, 2021). In line with social identity theory (Tajfel, 1981), scholars of affective polarization assume that, as a result of the self-categorization process, people divide the world into partisan in-group(s) and political out-group(s). This identification gives rise to in-group bias—a tendency to view the members of one's group more favorably than members of the political out-group—which, in turn, may translate to intergroup hostility (prejudice, dehumanization, or discrimination), especially when one's identity, status, or positive distinctiveness are threatened (Huddy & Yair, 2021). While some degree of policy disagreement in democracies is inevitable or even beneficial, the prevalence of affective polarization is widely considered to be a significant barrier to both functional democracies and effective governance (McCoy & Somer, 2019).

For that reason, social scientists have been trying to identify factors that fuel partisan animosity (for a review, see Iyengar et al., 2019). One of the most prominent explanations suggests that polarization stems from the increasing homogeneity of people's social environments (Enders & Armaly, 2019; Mason, 2016; Zollinger, 2024). For instance, de Jong (2024) demonstrated that adult Americans embedded in more politically heterogeneous discussion networks showed more positive attitudes toward their political opponents. In a similar vein, the analysis of survey data collected in Hong Kong showed that high ego-network difference (i.e., perceived political disagreement between a person and other people located in their discussion network) was associated with lower affective polarization (Lee, 2022).

However, while the negative link between social network heterogeneity and partisan prejudice has already been established, little is known about *why* having a politically diverse discussion network mitigates affective polarization. We propose that weakened moral conviction and reduced party identification—operating both independently and in sequence—may serve as an explanation for this relationship.

3. Attitude Demoralization and In-Group Reappraisal

Growing evidence suggests that politics is often viewed through a moral lens (K. N. Garrett & Bankert, 2020). Intergroup conflict, political contention included, facilitates transforming strong attitudes into moral convictions (see van Zomeren et al., 2024), understood as viewing the attitude object as a reflection of one's fundamental beliefs about what is right and what is wrong (Skitka, 2010). Unlike preferences and conventions, which are rooted in personal taste and in-group norms, respectively, moral convictions are seen as universal and unquestionable truths (Skitka et al., 2021). As a result, individuals with strong moral convictions about an issue often hold negative attitudes toward those expressing divergent opinions (Skitka et al., 2013; Zaal et al., 2017). These effects extend to politics: Those with moral convictions about political issues tend to exhibit greater social distance and prejudice towards out-group partisans (K. N. Garrett & Bankert, 2020; Simonsen & Bonikowski, 2022).

The strength of moral conviction about political issues varies not only between but also within individuals. The process of increasing or decreasing a moral conviction about a given issue is referred to as moralization or demoralization of attitudes, respectively (Skitka et al., 2021). Moralization can occur due to heightened perceptions of harm (Gray et al., 2012; Schein & Gray, 2018), exposure to shocking or emotionally intense attitude-relevant stimuli (Wisneski & Skitka, 2017), collective action participation (Leal et al., 2024), or contact with a disadvantaged out-group (Górska & Tausch, 2023a). Another factor known to facilitate the development

of moralized attitudes is the existence of politically homogeneous networks. In a longitudinal study of Trump and Biden supporters, D'Amore et al. (2024) showed that the increasing perceptions of network homogeneity were followed by the increased moralization of various political topics.

In this contribution, we propose that engaging in meaningful cross-partisan intergroup contact in heterogeneous political discussion networks can lead to de-moralization of politics, ultimately reducing affective polarization. Through such interactions and being exposed to counterattitudinal moral messages (Luttrell et al., 2019), partisans may come to realize that their moral beliefs are not absolute but reflect personal preferences and group conventions—and that others may hold different views (Facciani & Brashears, 2019). Additionally, discussing politics with individuals who hold opposing worldviews may weaken the automatic character of moral reasoning (Baumgartner & Morgan, 2019; Haidt, 2001) and force partisans to actively process their attitudes, thereby de-moralizing them (Ekstrom et al., 2020). Therefore, we expect that greater heterogeneity of discussion networks will be associated with lower moral conviction about politics and, in turn, lower affective polarization (see Figure 1).

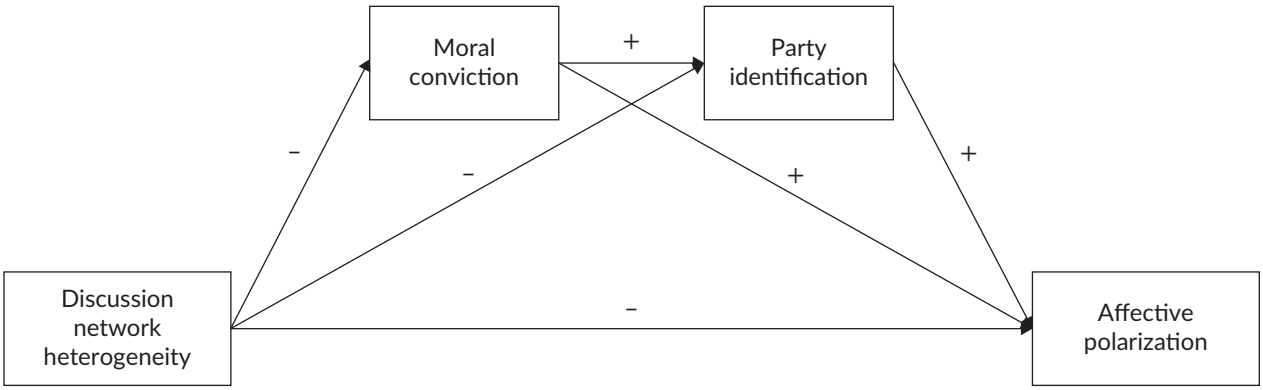

Figure 1. Theoretical model. Note: Controlling for intergroup contact quantity and quality assumed.

Importantly, de-moralization of attitudes due to exposure to cross-cutting beliefs within the discussion network is consistent with the ideas of deprovincialization (Pettigrew et al., 2011; Verkuyten et al., 2022). In contrast to provincialism, defined as "being centered in one's own small world" (Pettigrew, 2011, p. 1) and emerging among segregated and insular groups, deprovincialization results from intergroup contact (Schmid et al., 2013) and encompasses the belief that different cultures may be equally successful in managing the social world. According to its most recent conceptualization (Verkuyten et al., 2022), deprovincialization consists of two interconnected components: in-group reappraisal and out-group openness (also referred to as group and cultural deprovincialization, respectively). The process of in-group reappraisal—originally operationalized as the decrease in in-group identification (e.g., Pettigrew, 2009)—involves recognizing that the in-group's norms and values are not universally shared. Out-group openness, on the other hand, relies on developing greater acceptance and respect for other groups via empathy and perspective-taking.

Although deprovincialization has primarily been studied in the context of interethnic intergroup contact (e.g., Bagci et al., 2024), we believe that heterogeneous discussion networks are likely to have deprovincializing effects in the realm of politics, too, and these effects may be at least partially explained by the de-moralization of politics-related attitudes. The shift from viewing an issue as a matter of morality to seeing it as the function of social norms, which is at the heart of the de-moralization process (Skitka et al.,

2021), seems to overlap with in-group reappraisal, whereby a local character of in-group's norms, values, and traditions is recognized. At the same time, just as politicized identities may develop on the basis and in defense of values cherished by the in-group (Leal et al., 2024; van Zomeren et al., 2024), weakening of moral conviction may result in a decrease in identification with a political in-group. Therefore, it is reasonable to expect that heterogeneous discussion networks would diminish party identification by weakening moral conviction, which, given the identity-based character of affective polarization (Huddy et al., 2015; Huddy & Yair, 2021), may further translate into lower out-party hostility. Hence, we expected a serial mediation from network heterogeneity via moral conviction and party identification to affective polarization (H1).

This is not to suggest that the depolarizing effect of diverse discussion networks operates exclusively through a sequential decrease in moral conviction and party identification (Figure 1). Other pathways and intervening variables are also plausible. For instance, network heterogeneity may strengthen party identification by reducing the proportion or importance of in-group ties, the latter considered an important aspect of identification (e.g., Cameron, 2004). Likewise, the decline in moral conviction may ameliorate affective polarization by dampening negative moral emotions such as contempt, anger, or disgust (Clifford, 2019; Rozin, 1999; van Zomeren et al., 2024), effectively bypassing party identification. Thus, we expect both weakened moral conviction and reduced party identification to independently mediate the negative relationship between discussion network heterogeneity and affective polarization (H2 and H3, respectively).

4. Social Networks and Intergroup Contact

Researchers often attribute the depolarizing effect of heterogeneous discussion networks to intergroup contact (e.g., Facciani & Brashears, 2019; Hobolt et al., 2024). Specifically, being embedded in a politically diverse discussion network implies having intergroup contact with political opponents, while intergroup contact is known to reduce negative out-party attitudes (e.g., Tausch et al., 2024; Wojcieszak & Warner, 2020). While we agree that network heterogeneity and intergroup contact share some characteristics, this overlap is not complete.

We believe that heterogeneous discussion networks—at least as captured by asking individuals whom they discuss important matters with (Burt, 1984)—represent a particular form of intergroup contact, characterized by high levels of self-disclosure, depth, and repeated interaction over time (see Facciani & Brashears, 2019). As shown by Davies et al.'s (2011) meta-analysis on prejudice reduction due to cross-group friendship, these aspects of intergroup relationships yield the strongest effects on out-group-directed attitudes. By contrast, traditionally assessed intergroup contact encompasses a variety of relationships, ranging from superficial interactions with strangers to lifelong friendships (Page-Gould et al., 2022; Pettigrew & Tropp, 2006). Thus, the instances of intergroup contact may differ in quality, depth, and duration.

Another key difference lies in the measurement. Network heterogeneity indices are often based on the division between in-group and out-group (i.e., non-in-group) ties, where the latter serves as the complement of the former. Therefore, the larger proportion of out-group ties translates directly to the smaller proportion of in-group ties. Meanwhile, knowing numerous out-group members—a common operationalization of extensive intergroup contact (e.g., Górska & Tausch, 2023a)—does not necessitate limited relationships within one's in-group.

We believe that these discrepancies may be consequential for the processes of attitude de-moralization and in-group reappraisal. Past research suggests that individuals' definitions of good and evil, as well as their understanding of the world, are shaped through repeated meaningful interactions with close rather than distant associates (e.g., Facciani & Brashears, 2019; Górska & Tausch, 2023a). While immediate social environments formed entirely by like-minded others reinforce belief strength, close ties with dissimilar others weaken one's certainty in the existing beliefs (Berger, 1967; Smith et al., 1999). Building on these findings, one may claim that to serve as an accurate predictor of worldview formation, a measure needs to (a) assess close rather than distant ties and (b) capture the trade-off between in-group and out-group ties. Unlike traditional intergroup contact scales, indices of discussion network heterogeneity meet both these conditions. Therefore, it is reasonable to expect that heterogeneous discussion networks will be a stronger predictor of decreased moral conviction and party identification as compared to intergroup contact in general (H4).

5. Current Research

The present research has two primary goals. First, we aim to examine the psychological mechanisms underlying the impact of social networks on affective polarization, operationalized as in-group bias and blatant dehumanization of political opponents. We propose that the de-moralization of politics and (subsequent) in-group reappraisal will explain the negative relationship between network heterogeneity and affective polarization. Second, we seek to compare the effects of discussion network heterogeneity and more superficial intergroup contact. We hypothesize that repeated, meaningful intergroup contact within discussion networks is more likely to elicit attitude de-moralization and in-group reappraisal processes than intergroup contact beyond one's discussion network.

We test our hypotheses in Poland, a country that has experienced rising popular and elite polarization since the transformation to liberal democracy and free-market capitalism in the early 1990s. In the early post-transformation period, Polish society was primarily polarized with regard to the view on the abolished communist system. In particular, some believed that the former communists should be severely punished and excluded from participation in politics (i.e., lustration), while others proposed that they still should be allowed to sit in the democratic parliament. With most of the former communists retiring or passing, this conflict became less salient. In the mid-2000s, two major parties have emerged: Law and Justice (original name: Prawo i Sprawiedliwość) and Civic Platform (original name: Platforma Obywatelska). A conflict between supporters of these two parties has been growing, especially following the 2010 plane crash in Smolensk, when the death of President Lech Kaczyński (one of the founders of Law and Justice) led to the spread of divisive conspiracy theories of a presumed assassination of the president (Bilewicz et al., 2019). Over time, two antagonistic political forces have solidified—the conservative block, with the leading role of the Law and Justice party (Poland's ruling party from 2015 to 2023), and the pro-democratic block, involving a range of parties opposing the Law and Justice government (which, as the so-called "October 15th coalition," seized power in 2023).

The political conflict between these actors has become increasingly moralized. After winning the elections in 2023, the current Prime Minister Donald Tusk declared: "On October 15th [election day] we defeated pure evil" (Szczęśniak, 2024). Meanwhile, Jarosław Kaczyński, the leader of Law and Justice and brother of President Lech Kaczyński, urged his supporters to "defeat this evil once and for all" during a recent protest

outside the Prime Minister's Office (Bounaoui, 2024). Comparative research (Marchlewska et al., 2024) suggests that the level of affective polarization in Polish society may be close to that found in the United States, despite Poland being a multiparty system, which is generally expected to mitigate polarization (Wagner, 2021). However, most research on affective polarization, including studies on the role of discussion networks, has focused on two-party systems, particularly in the United States (Ekstrom et al., 2020; Facciani & Brashears, 2019). Our study contributes to the literature by examining the mechanisms through which heterogeneous discussion networks and extra-network intergroup contact shape affective polarization in a multiparty context of Poland.

6. Method

We conducted the current research as part of an in-house computer-assisted survey on political and social issues (Górska & Tausch, 2023b; Marchlewska et al., 2022, 2023; Wohl et al., 2020). While the study consisted of three measurements divided by two 6-month intervals, only data from the first wave was used to verify our hypotheses. The reason behind it was the low number of eligible participants (i.e., those who voted for the ruling party or the pro-democratic opposition and provided ego-network data) in the subsequent waves ($n_1 = 378$, $n_2 = 239$, $n_3 = 150$), weakening the statistical power of potential longitudinal analyses.

In the first out of three measurements, a representative sample of adult Poles was achieved using random sampling, with the Polish identity number (PESEL) serving as a sampling frame. The fieldwork was performed by a commercial research company (i.e., Danae) in July and August 2019, a few months ahead of the parliamentary election held on October 13th.

The initial sample consisted of 1,300 individuals (602 men and 698 women), aged between 18 and 93 ($M = 47.20$, $SD = 16.18$). However, as we measured affective polarization only among the ruling party (i.e., Law and Justice) and pro-democratic opposition (i.e., Civic Coalition, Modern, Polish People's Party, the Democratic Left Alliance, Spring, and Together Party) voters, and less than a half (47.8%) of the respondents provided ego-network data, the final sample involved only 378 participants (157 men and 221 women). Respondents' age ranged from 18 to 83 years ($M = 47.80$, $SD = 15.58$). In comparison to the excluded participants, individuals comprising the final sample were better educated, and more likely to be female. No significant differences in terms of age or settlement size were found (see the Supplementary File).

7. Measures

Unless otherwise noted, all measures used the response scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). For multi-item measures, the composite scores were obtained by averaging participants' responses.

Participants' *group membership* (i.e., supporting the ruling party or the pro-democratic opposition) was determined based on their response to the following question: "If the parliamentary elections were held this Sunday, for which party candidate would you vote?" Possible responses were the following: 1 = Confederation Liberty and Independence; 2 = Kukiz'15; 3 = Modern; 4 = Together Party: 5 = Civic Coalition; 6 = Polish People's Party; 7 = Law and Justice; 8 = Democratic Left Alliance; 9 = Spring; 10 = Other party; 11 = I don't know; 12 = I will not participate. Participants who indicated support for Law and Justice were classified as ruling party supporters, while those intending to vote for Modern, Together

Party, Civic Coalition, Polish People's Party, Democratic Left Alliance, or Spring were categorized as the *democratic opposition supporters*. Individuals who selected Confederation Liberty and Independence, Kukiz'15, or other party, as well as those who had no voting preference or did not intend to participate in the elections, were not asked about their moral conviction, party identification, or attitudes toward the ruling party and democratic opposition voters. This is because these parties were small and independent from both main polarized blocks. Consequently, they were excluded from the further analyses.

To elicit *ego-network data*, respondents were first asked whether they had talked to anyone in person, on the phone, online, or through any other medium about issues important to them in the past six months. Possible responses were the following: 1 = Yes, I did; 2 = No, I didn't; 3 = I don't know/It's hard to say; 4 = Response refusal. The 6-month timeframe specified in the question matched the 6-month intervals between consecutive measurements (see Hamaker, 2023). Participants who declared talking to anyone were then asked to name up to five individuals (alters) with whom they had discussed important issues during this period (Brashears, 2014). These persons formed participants' discussion networks. For each alter, respondents provided information on various characteristics, including—but not limited to—gender, age, and ties with the remaining alters (for a complete list, see the Supplementary File). The attribute that we used to gauge the heterogeneity of participants' discussion networks were voting preferences, assessed with the following question: "If the parliamentary elections were held this Sunday, for which party candidate do you think [alter's name] would vote?" Possible responses were the following: 1 = Confederation Liberty and Independence; 2 = Kukiz'15; 3 = Modern; 4 = Together Party; 5 = Civic Coalition; 6 = Polish People's Party; 7 = Law and Justice; 8 = Democratic Left Alliance; 9 = Spring; 10 = Other party; 11 = I don't know; 12 = They will not participate. Prior to calculating *network heterogeneity*, we recoded alters' voting preferences into a four-category variable: Alters perceived to support Modern, Together Party, Civic Coalition, Polish People's Party, Democratic Left Alliance, or Spring were categorized as *pro-democratic opposition voters* (1); alters believed to support Law and Justice were categorized as *ruling party* voters (2); alters viewed as the supporters of Confederation Liberty and Independence, Kukiz'15, or other minor parties were categorized as *other party voters* (3); individuals with unspecified political preferences or those unwilling to vote were assigned to the *no preference/non-voters* group (4). We opted for this four-category variable over the original 12-category variable to better reflect the political divisions at the time of data collection (summer 2019) and accurately distinguish between in-group and out-group ties (at the same time, using the original 12-category variable did not change the results in a meaningful way; see the Supplementary File). Moreover, the newly created variable was consistent with the potential development of a superordinate pro-democratic opposition voter identity among the supporters of pro-democratic opposition parties, who may have perceived each other as in-group members rather than out-group members. As all parties categorized here as representing pro-democratic opposition joined the October 15th coalition government after the 2023 parliamentary elections (e.g., Plichta, 2024), treating them as a single block seems justified. Discussion network heterogeneity was operationalized as the E-I index, calculated by subtracting the number of ego's internal ties from external ties and dividing the result by the total number of ties (Krackhardt & Stern, 1988). The index could take values between −1 (the respondent has exclusively in-group ties) to 1 (the respondent has exclusively out-group ties). Participants' E-I scores were obtained with E-NET, a specialized software for the analysis of ego-network data (Borgatti, 2006).

Intergroup contact quantity was measured with two items:

1. "How many supporters of the opposition parties (i.e., Civic Coalition, Modern, Polish People's Party, Democratic Left Alliance, Spring, and Together Party)/the ruling party (i.e., Law and Justice) do you know?" (1 = none; 2 = one; 3 = two; 4 = three; 5 = four; 6 = five or more);
2. "How often do you talk to the supporters of the opposition parties (i.e., Civic Coalition, Modern, Polish People's Party, Democratic Left Alliance, Spring, and Together Party)/the ruling party (i.e., Law and Justice)?" (1 = never; 2 = once a year; 3 = several times per year; 4 = once a month; 5 = once a week; 6 = everyday).

Participants' responses to these questions correlated positively ($r(310) = .51$, $p < .001$).

To measure *intergroup contact quality*, we asked the respondents how they would describe their relationships with the opposition (i.e., Civic Platform, Modern, Polish People's Party, Democratic Left Alliance, Spring and Left Together?)/the Law and Justice supporters (1 = *negative*, 6 = *positive*; 1 = *unpleasant*, 6 = *pleasant*). Two items creating the quality index correlated positively ($r(346) = .85$, $p < .001$).

To assess *moral conviction*, we employed two items patterned after the scale provided by van Zomeren et al. (2012): "My opinion about opposition parties' (i.e., Civic Coalition, Modern, Polish People's Party, Democratic Left Alliance, Spring, and Together Party)/ruling party (i.e., Law and Justice) supporters is an important part of my moral norms and values" and "My opinion about opposition parties' (i.e., Civic Coalition, Modern, Polish People's Party, Democratic Left Alliance, Spring, and Together Party)/ruling party (i.e., Law and Justice) reflects an important part of who I am" ($r(360) = .82$, $p < .001$).

In-group identification was assessed with two items borrowed from Cameron's (2004) scale: "I have a lot in common with other supporters of the opposition parties/ruling party (Law and Justice)" and "Being a supporter of the opposition parties/ruling is an important reflection of who I am" ($r(359) = .63$, $p < .001$).

To make sure that our conclusions would not depend on the way in which affective polarization is operationalized, we employed two measures of this construct—*blatant dehumanization* and *in-group bias*. *Blatant dehumanization* was assessed with the Ascent of Man pictorial scale (Kteily et al., 2015). Participants viewed an image illustrating five stages of evolutionary progress from ape to human. Alongside the image, a 9-point scale was provided, with 1 representing *the least* and 9 corresponding to *the most* advanced stage of evolution. Participants were asked to indicate how evolved they perceived their in-group and out-group members. The relative dehumanization score was calculated by subtracting out-group humanity rating from in-group humanity rating (e.g., Kteily et al., 2016).

We assessed *in-group bias* with the feeling thermometer (Alwin, 1997), ranging from −50°C (negative feelings) to 50°C (positive feelings). Respondents were asked to indicate their feelings both toward the in-group (either Law and Justice or democratic opposition supporters) as well as the out-group (democratic opposition or Law and Justice supporters, respectively). In-group favoritism score was obtained by subtracting feelings toward the out-group from feelings toward the in-group (e.g., de Jong, 2024). To avoid convergence problems at the analysis stage, the in-group-out-group difference was divided by 10.

To assess participants' *education*, we asked them how many years of full-time education they had completed (an open-ended question). The responses ranged from 3 to 36.

Participants were also asked about the *size of the settlement they lived in*. Possible responses were the following: 1 = rural area; 2 = town up to 50,000 residents; 3 = town between 50,001 and 100,000 residents; 4 = town between 100,001 and 200,000 residents; 5 = city between 200,001 and 500,000 residents; 6 = city with more than 500,000 residents.

8. Results

Table 1 presents descriptive statistics and intercorrelations for the analyzed variables. In comparison to the ruling party supporters, democratic opposition supporters had more heterogeneous discussion networks ($M_{\text{ruling party}} = -0.48$, $SD_{\text{ruling party}} = 0.71$, vs. $M_{\text{democratic opposition}} = -0.27$, $SD_{\text{democratic opposition}} = 0.81$, $t(335.15) = -2.64$, $p = .009$, $d = -0.28$), reported more frequent contact with political opponents ($M_{\text{ruling party}} = 3.64$, $SD_{\text{ruling party}} = 1.41$, vs. $M_{\text{democratic opposition}} = 3.97$, $SD_{\text{democratic opposition}} = 1.50$, $t(339) = -2.10$, $p = .037$, $d = -0.23$), displayed higher level of blatant dehumanization ($M_{\text{ruling party}} = 1.44$, $SD_{\text{ruling party}} = 1.90$, vs. $M_{\text{democratic opposition}} = 2.15$, $SD_{\text{democratic opposition}} = 2.51$, $t(337.40) = -3.05$, $p = .002$, $d = -0.32$), were younger ($M_{\text{ruling party}} = 52.24$, $SD_{\text{ruling party}} = 15.03$, vs. $M_{\text{democratic opposition}} = 43.37$, $SD_{\text{democratic opposition}} = 14.87$, $t(376) = 5.77$, $p < .001$, $d = 0.59$) and better-educated ($M_{\text{ruling party}} = 12.64$, $SD_{\text{ruling party}} = 3.55$, vs. $M_{\text{democratic opposition}} = 13.92$, $SD_{\text{democratic opposition}} = 2.97$, $t(366) = -3.75$, $p < .001$, $d = 0.39$), and lived in larger settlements ($M_{\text{ruling party}} = 2.22$, $SD_{\text{ruling party}} = 1.66$, vs. $M_{\text{democratic opposition}} = 3.07$, $SD_{\text{democratic opposition}} = 1.86$, $t(371.18) = -4.66$, $p < .001$, $d = -0.48$). The two groups did not differ in terms of intergroup contact quality, moral conviction, party identification, in-group bias and gender distribution (all $ps > .101$).

Table 1. Descriptive statistics and intercorrelations for ruling party and opposition supporters.

		M	*SD*	1	2	3	4	5	6	7	8	9	10
1.	Ego-network heterogeneity	−0.38	0.76	—									
2.	Intergroup contact quality	3.77	1.29	.16**	—								
3.	Intergroup contact quantity	3.81	1.46	.20***	.33***	—							
4.	Moral conviction	4.69	1.62	−.13*	−.04	.14**	—						
5.	Party identification	4.85	1.47	−.16**	.03	.29***	.55***	—					
6.	Blatant dehumanization	1.80	2.25	−.04	−.34***	−.02	.13*	.19***	—				
7.	In-group bias	4.34	3.09	−.20***	−.45***	−.04	.21***	.29***	.65***	—			
8.	Gender (0 = F, 1 = M)	0.42	0.49	.10	−.06	−.03	−.003	−.04	−.04	−.05	—		
9.	Age	47.80	15.58	−.07	−.11*	−.08	.09	.04	.06	.15**	.04	—	
10.	Years of education	13.29	3.33	.05	.03	.08	−.07	−.04	−.02	.02	−.13*	−.34***	—
11.	Settlement size	2.65	1.81	.05	−.07	−.02	−.09	−.08	−.04	.02	.03	−.07	.21***

Notes: *** $p < .001$. ** $p < .01$. * $p < .05$; correlation coefficients for the ruling party and democratic opposition supporters are presented above and below the diagonal, respectively.

9. Hypotheses Testing

We verified our theorizing in the structural equation modelling (SEM) framework. To simultaneously examine hypotheses 1–4 among the ruling party and democratic opposition voters, we conducted a multiple-group analysis using observed variables. While *discussion network heterogeneity*, *intergroup contact quantity*, and *intergroup contact quality* were specified as exogenous predictors, moral conviction and party identification were defined as consecutive mediators, and blatant dehumanization and in-group bias served as the dependent variables (see Figure 2). The analyses used the maximum likelihood estimation and were evaluated according to the established fit indices criteria (Hu & Bentler, 1998). Statistical significance of indirect effects was determined based on 95% CIs obtained with bootstrapping (5,000 samples). The full information maximum likelihood method was employed to handle missing data. All analyses were performed in lavaan (Rosseel, 2012) using R.

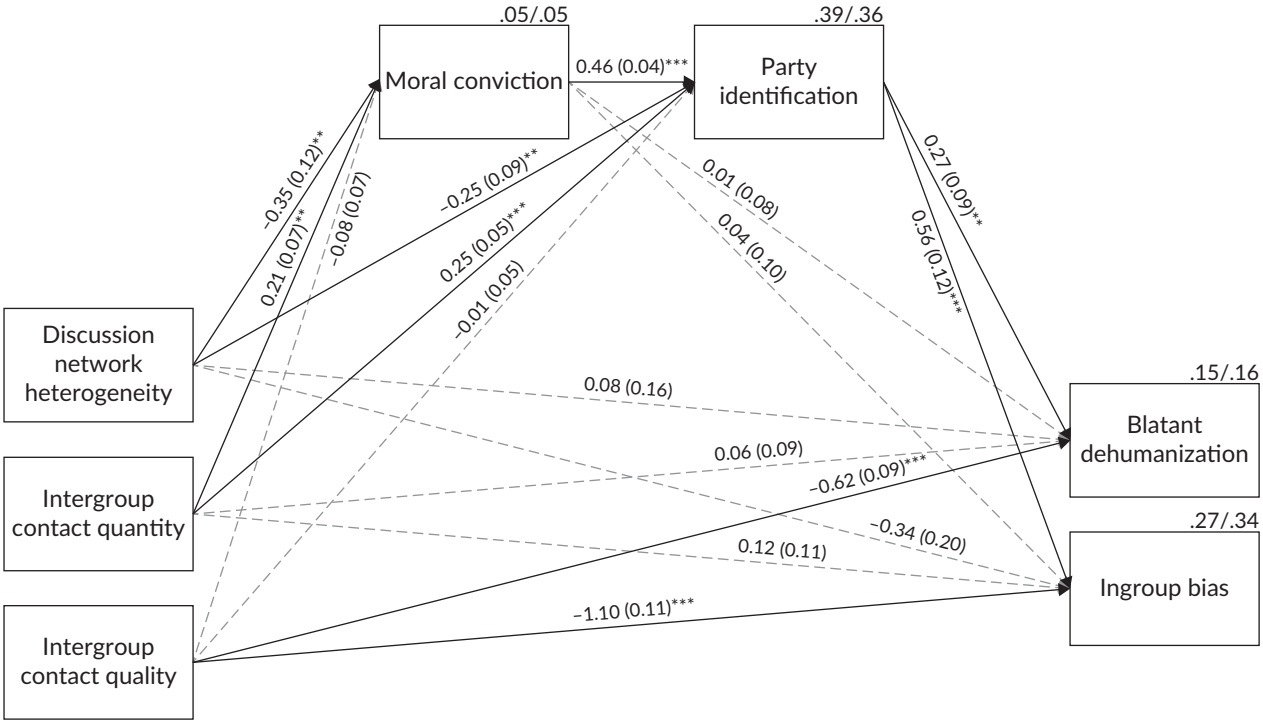

Figure 2. Structural and psychological antecedents of affective polarization. Notes: Entries are unstandardized estimates; solid and dashed lines represent significant and nonsignificant effects, respectively; R^2 coefficients for the ruling party supporters are presented first.

Model 1, which imposed no equality constraints across the two groups, was saturated and, by definition, fitted the data perfectly. At the same time, it did not outperform Model 2 that forced the corresponding paths to be equal for the ruling party and pro-democratic opposition supporters, $\chi^2(21) = 24.79$, $p = .256$, CFI = .993, RMSEA = .031, SRMR = .064, $\Delta\chi^2(21) = 24.79$, $p = .256$. Therefore, we assumed that the investigated processes were the same across the two groups and interpreted the results of a more parsimonious Model 2 (Figure 2).

In line with our expectations, discussion network heterogeneity was a negative predictor of moral conviction, moral conviction served as a positive predictor of party identification, and party identification

predicted blatant dehumanization and in-group bias positively. The serial indirect effect of ego-network heterogeneity on blatant dehumanization via reduced moral conviction and party identification was negative and significant (*IE* = −0.04, *SE* = 0.02, 95% *CI* [−0.10, −0.01]). In a similar vein, discussion network heterogeneity was indirectly related to lower in-group bias; this relationship was sequentially mediated by decreased moral conviction and party identification (*IE* = −0.89, *SE* = 0.39, 95% *CI* [−1.74, −0.23]). Thus, irrespective of how the affective polarization was operationalized, the results consistently supported H1.

Notably, the pathway through moral conviction and party identification was not the only mechanism linking discussion network heterogeneity and the outcome variables. Decreased party identification independently mediated the relationships between discussion network heterogeneity and both blatant dehumanization (*IE* = −0.07, *SE* = 0.04, 95% *CI* [−0.15, −0.01]) and in-group bias (*IE* = −1.39, *SE* = 0.57, 95% *CI* [−2.65, −0.39]). By contrast, reduced moral conviction alone did not constitute a significant pathway to blatant dehumanization (*IE* = −0.005, *SE* = 0.03, 95% *CI* [−0.07, 0.06]) or in-group bias (*IE* = −0.10, *SE* = 0.36, 95% *CI* [−0.87, 0.60]). These results were consistent with H3 but not with H2.

To verify H4, according to which the processes of de-moralization and in-group reappraisal are more likely to be triggered by discussion network heterogeneity than intergroup contact beyond one's immediate social environment, we compared the exogeneous variables' effects on moral conviction and party identification. In line with our expectations, the negative effect of discussion network heterogeneity on moral conviction differed significantly from the corresponding *positive* effect of intergroup contact quantity ($\Delta\chi^2(1) = 16.25$, $p < .001$), while the difference with the null effect of intergroup contact quality was on the verge of significance ($\Delta\chi^2(1) = 3.69$, $p = .055$). In a similar vein, the total effect of discussion network heterogeneity on party identification was negative (*TE* = −0.42, *SE* = 0.10, 95% *CI* [−0.59, −0.23]), and differed significantly from the positive total effect of intergroup contact quantity (*TE* = 0.35, *SE* = 0.06, 95% *CI* [0.23, 0.46]; Δ*TE* = −0.76, *SE* = 0.12, 95% *CI* [−0.99, −0.55]) and the null total effect of intergroup contact quality (*TE* = −0.04, *SE* = 0.06, 95% *CI* [−0.19, 0.10]; Δ*TE* = −0.38, *SE* = 0.13, 95% CI [−0.61, −0.14]). Thus, present data was rather supportive of H4.

Importantly, the unexpected, positive effects of intergroup contact quantity on moral conviction and party identification translated to the level of affective polarization. In particular, the quantity of contact with political opponents indirectly predicted stronger blatant dehumanization and in-group bias by the sequence of increased moral conviction and party identification (*IE* = 0.03, *SE* = 0.01, 95% *CI* [0.01, 0.05] and *IE* = 0.54, *SE* = 0.20, 95% *CI* [0.20, 0.97] respectively). Additionally, the relationship between intergroup contact quantity and both outcome variables was mediated by increased party identification alone (*IE* = 0.07, *SE* = 0.03, 95% *CI* [0.02, 0.12] for blatant dehumanization and *IE* = 1.38, *SE* = 0.40, 95% *CI* [0.68, 2.24] for in-group bias). On the other hand, neither moral conviction nor party identification explained the negative effects of intergroup contact quality on blatant dehumanization and in-group bias (see Figure 2).

10. Robustness Checks

To assess the robustness of current findings, we repeated the analyses using alternative operationalizations of discussion network composition. Specifically, we used the original 12-category variable to represent party preferences as well as the proportion of alters showing the same party preference as ego, which has been used as the measure of discussion network homogeneity (the opposite of heterogeneity) in past research

(e.g., Facciani & Brashears, 2019). These modifications led to only minor changes in our conclusions (see the Supplementary File).

11. Additional Analyses

Although our theorizing posits a specific structure of connections between discussion network heterogeneity, moral conviction, party identification, and affective polarization, it should be acknowledged that other patterns of relationships between these variables are also theoretically plausible. For instance, it is legitimate to expect that strong moral conviction would moderate the effects of discussion network heterogeneity on party identification and out-group dislike (Figure 3).

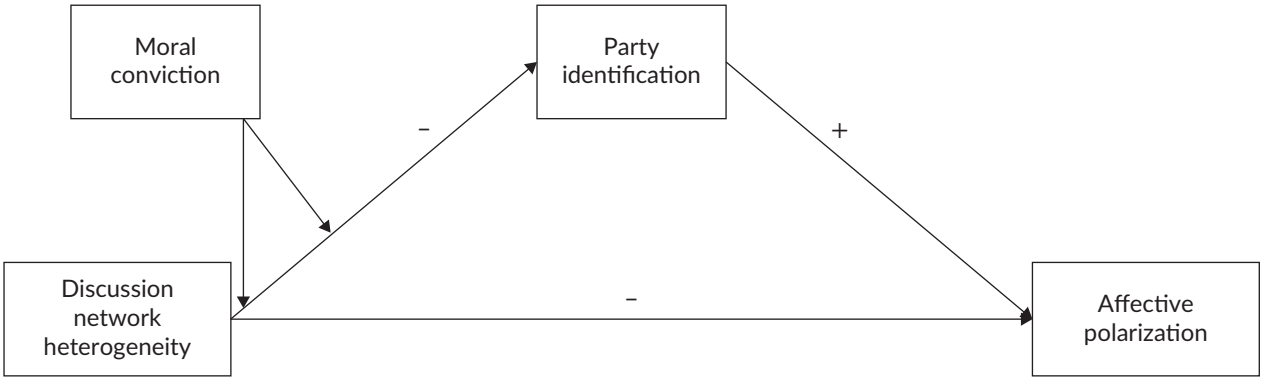

Figure 3. Alternative theoretical model. Note: Controlling for intergroup contact quantity and quality is assumed.

As revealed in the past research, due to their absolute character, high moral convictions diminish associations between typically related phenomena (de Cristofaro et al., 2021). Therefore, the negative effects of discussion network heterogeneity on affective polarization (both the indirect effect via decreased party identification and the direct effect) may be weak or non-existent at high levels of moral conviction and emerge only when moral conviction is low. Alternatively, if network heterogeneity works in a similar manner as intergroup contact, its prejudice-reduction effects may be the strongest among those partisans who are most strongly predisposed to show high initial levels of out-group hostility (e.g., Dhont & van Hiel, 2009, 2011; Hodson et al., 2009). Given that moral conviction correlates positively with affective polarization (K. N. Garrett & Bankert, 2020), the negative effect of discussion network heterogeneity should be most strongly pronounced at high levels of moral conviction. Additional analyses indicated that our data were more supportive of this latter possibility (see the Supplementary File).

12. Discussion

This study had two objectives. First, we sought to uncover the psychological mechanisms that explain the relationship between discussion network heterogeneity and affective polarization. Second, we investigated whether heterogeneous discussion networks and extra-network intergroup contact (over and above the contact one has in their network) have distinct effects on attitudes toward political opponents and their psychological antecedents, specifically moral conviction and party identification.

The analysis of survey data from the Polish political context supported our hypotheses. A greater presence of out-group ties in one's discussion network was indirectly associated with reduced in-group bias and lower blatant dehumanization of political opponents. These effects were mediated by a sequence of diminished moral conviction and weakened party identification, as well as by lower party identification alone. In contrast, the quantity of intergroup contact beyond one's ego network was positively related to in-group bias and out-group dehumanization. These effects were explained by heightened moral conviction and party identification operating in sequence, as well as by the increased party identification on its own. At the same time, high-quality intergroup contact beyond one's discussion network was linked to lower in-group bias and blatant dehumanization, though these effects were not explained by the changes in moral conviction and party identification.

Our findings contribute to the literature in several ways. First, we provide evidence on the mechanisms underpinning the negative link between discussion network heterogeneity and affective polarization. While past research has shown that being embedded in a politically diverse social environment is associated with lower dislike of political opponents (e.g., de Jong, 2024; Lee, 2022), it had not been clear *why* this was the case. Our study addressed this gap by identifying two key psychological processes—one involving the sequence of attitude de-moralization and in-group reappraisal, and the other relying on the independent decline in party identification—as responsible for the depolarizing effect of a heterogeneous discussion network. As such, current results support the proposition that the link between social structure and political conflict (de)escalation is at least partially accounted for by the moralization and identification processes (d'Amore et al., 2024; van Zomeren et al., 2024).

Next, present findings highlight key differences in the effects of close and distant outparty ties. While previous studies have examined the impact of close ties to out-partisans (understood as cross-cutting integroup contact in one's discussion network) on ideological (e.g., Facciani & Brashears, 2019) and affective polarization (R. K. Garrett et al., 2014; Lee, 2022; Robinson, 2010), research directly contrasting the effects of close and distant ties remains scarce. To our knowledge, only one study has made such a comparison, showing that both heterogeneous discussion networks (i.e., close ties) and acquaintance networks (i.e., distant ties) predict lower partisan animosity, with the latter having a slightly stronger effect (de Jong, 2024). Our findings expand on this evidence by taking a more nuanced perspective on intergroup contact beyond the discussion networks—differentiating between contact quantity and quality—and investigating how close and distant outparty ties relate to psychological processes underlying political polarization. Notably, we show that even at the correlational level (see Table 1), two quantity-focused operationalizations of interparty relationships—discussion network heterogeneity and intergroup contact quantity—exhibit opposite relationships with moral conviction and party identification. Specifically, while discussion network heterogeneity is linked to attitude de-moralization and in-group reappraisal, greater contact quantity is related to stronger moralization and in-group identification. These results are in line with the suggestion that close out-group members are more important for weakening one's political beliefs than the distant ones (Facciani & Brashears, 2019).

At the same time, although high-quality intergroup contact beyond the discussion network shows strong, negative relationships with different measures of affective polarization, these effects are not explained by changes in moral conviction or in-group identification This suggests that while positive intergroup contact with the out-partisans beyond the closest social milieu fosters more favorable attitudes toward political

opponents—perhaps even more effectively than discussion network heterogeneity (de Jong, 2024)—it does not necessarily trigger attitude de-moralization in in-group reappraisal processes. Consistent with past theorizing (Berger, 1967; Smith et al., 1999) and empirical findings (Facciani & Brashears, 2019), perceiving the political divisions through a less moralized lens and developing a more nuanced view of the in-group seem to require interactions with close outparty associates rather than pleasant encounters with distant out-partisans.

Finally, current results add to the literature by showing that some aspects of non-negative inter-party contact may be related to *greater* affective polarization. Specifically, when discussion network heterogeneity and intergroup contact quality are controlled for, the quantity of extra-network intergroup contact serves as a positive predictor of moral conviction and in-group identification, which, in turn, are associated with greater out-group dislike. This result is consistent with past research showing that social identity threat reverses the positive relationship between the repeated exposure to out-group-relevant stimuli and positive emotions towards those objects (Crisp et al., 2009). In a similar vein, given that contact with political opponents is often perceived as threatening (see Wojcieszak & Warner, 2020), frequent interactions with distant out-party associates may enhance partisan animosity.

Despite these contributions, our research has several limitations, most of which stem from suboptimal measurement. First, due to the high cost of face-to-face data collection, we used a numerically constrained name generator, which may have introduced an error to the measures of network composition (Bidart & Charbonneau, 2011; see also Kogovšek & Hlebec, 2005). The five-alter upper limit may have failed to capture some influential alters, the presence of whom would change participants' discussion network heterogeneity scores. On the other hand, 84.7% participants named from 1 to 4 alters, which suggests that insufficient coverage was a rather minor problem in the present sample.

Second, network homogeneity was assessed based on participants' self-reports collected through face-to-face interviews. This mode of data collection comes with a range of potential limitations, such as recall bias (Bell et al., 2007), social desirability bias (Nederhof, 1985), and inaccuracies in participants' perception of alters' attributes or alter-alter ties (e.g., Goel et al., 2010). Replicating present findings using whole-network data would substantially strengthen confidence in the robustness of these results.

Next, our measures of intergroup contact were rather general and did not explicitly distinguish between close and distant out-group associates. Given their weak correlations with discussion network heterogeneity (see Table 1), we assumed that intergroup contact quantity and quality scales captured distant rather than close ties. Additionally, by incorporating both intergroup contact and discussion heterogeneity into the same structural model, we controlled for the variance that broad intergroup contact shared with close out-group ties comprising one's discussion network. This approach allowed us to interpret the effects of contact quantity and quality as reflecting interactions with more distant out-group associates. However, future studies should directly assess contact with political opponents beyond one's close ties—for instance, by explicitly inquiring about interactions with out-group representatives different than those identified using the important matters name generator (see de Jong, 2024).

Then, while current research suggests that contact-driven deprovincialization extends to political context, it overlooks the multifaceted character of this construct. Early accounts of the deprovincialization hypothesis

(Pettigrew, 1997, 2009) framed it primarily as an in-group-related phenomenon. However, more recent conceptualizations suggest that, apart from in-group reappraisal, deprovincialization includes an out-group-related dimension—namely, increased out-group openness (Verkuyten et al., 2022). By operationalizing deprovincialization as decreased party identification, current research neglects this out-group-related component. This omission may be important, as, compared to in-group reappraisal, out-group openness is more strongly linked to intergroup experiences, such as intergroup contact (e.g., Boin et al., 2020; Lucarini et al., 2023). It is therefore conceivable that high-quality intergroup contact—either within or beyond one's discussion network—mitigates affective polarization not only by shifting one's perspective on the in-group, as the present results suggest, but also by expanding one's openness to alternative worldviews. This mechanism may be particularly relevant for intergroup contact quality, which predicted lower affective polarization directly, but not through moral conviction or party identification. To explore this possibility, future research would do well to adopt a more granular view of deprovincialization.

At the same time, other psychological processes may also explain why high-quality contact with distant outparty associates is related to lower affective polarization. The list of candidate mechanisms involves weaker intergroup anxiety and stronger out-group-directed empathy (Pettigrew & Tropp, 2008), higher commonality perceptions (Wojcieszak & Warner, 2020), or more favorable metaperceptions (Landry et al., 2023; Moore-Berg et al., 2020), to name just a few. Assessing all these mechanisms simultaneously would grant the opportunity to determine their relative importance and, perhaps, identify further differences in the psychological consequences of close and distant out-group ties.

Finally, like any cross-sectional study, the current research does not warrant strong causal inference. While the present results align with our expectations regarding the relative ordering of variables in the causal chain, they do not rule out alternative patterns of relationships (e.g., discussion network composition being a consequence rather than a cause of affective polarization). Thus, we advise caution in interpreting these findings and recommend their replication in an adequately powered longitudinal research.

Acknowledging all these limitations, we believe the present findings offer unique insights into the depolarizing potential of heterogeneous discussion networks and encourage further integration between social networks, intergroup contact, and affective polarization literatures.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

Data and code necessary to replicate our analyses are available here: https://osf.io/zakws/?view_only=0694ab73eb3a4e1e9df5c716ae13344d.

LLMs Disclosure

The first draft of this article was refined for clarity and language with the assistance of ChatGPT.

Supplementary Material

Supplementary material for this article is available online in the format provided by the author (unedited).

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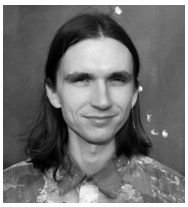

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