

Ego-Network Difference, Political Communication, and Affective Polarization During Political Contention

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This study examines the implications of ego-network difference, understood as the presence of (perceived) political disagreement between a person and people in his or her social network, on affective polarization in the context of a contentious protest movement. Based on arguments from contact theory and the literature on the influence of interpersonal political discussions, this study tests a series of hypotheses about how ego-network difference shapes extents of interpersonal political discussion, amount of cross-cutting exposure, and attitude toward the political outgroup. Analysis of survey data in Hong Kong shows that ego-network difference is related to lower levels of interpersonal political discussions, higher levels of cross-cutting exposure, and lower levels of affective polarization. It undermines negative attitude toward the political outgroup both directly and indirectly through reducing interpersonal discussions, though not through cross-cutting exposure. Moreover, ego-network difference weakens the relationship between interpersonal discussion and polarization. Theoretical implications of the findings are discussed.

Keywords: affective polarization, ego-network difference, network heterogeneity, cross-cutting exposure, interpersonal political discussion, Hong Kong

The phenomenon of political polarization has been a continual concern in many countries in the past two decades. Researchers have put much effort into identifying the factors that might mitigate or aggravate polarization. Communication scholars have conducted research on whether and how cross-cutting discussions, that is, discussing politics and public affairs with people holding contrary viewpoints, can alleviate the problem of polarization by constructing a more balanced information environment and promoting understanding of alternative views (Amsalem, Merkley, & Loewen, 2021). Other researchers have examined the extent to which people would encounter political disagreement on social media (Barnidge, 2017; Hopp, Ferrucci, Vargo, & Fisher, 2020) and whether social media use leads to polarization (Nordbrandt, 2021; Yarchi, Baden, & Kligler-Vilenchik, 2021).

Underlying the aforementioned research is the belief that political disagreement matters. While past research on the impact of network heterogeneity mainly refers to the heterogeneity within people's network of discussants (Lu & Lee, 2020; Scheufele, Nisbet, Brossard, & Nisbet, 2004), people may recognize

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that their family members, friends, and colleagues have political views different from theirs even if they discuss politics with each other infrequently. Yet once political differences are recognized, they might have an impact on various outcome variables, including attitude toward the political outgroup.

This article focuses on the notion of ego-network difference, defined as the degree to which individuals find their political views differing from those held by people in their network. This focus shifts our attention from political communication activities themselves to the social fabric which people weave together through their everyday life. It will be argued that, within the context of a highly contentious protest movement, ego-network difference may alleviate the problem of affective polarization both directly and indirectly through reducing amount of interpersonal political discussions and increasing amount of cross-cutting exposure. The analysis shall therefore contribute to the literature by illustrating how the characteristics of the social networks that people form through their everyday life could impinge on public opinion. It illustrates the role of the social fabric in shaping the formation of public opinion in society.

This article begins by discussing the concept of ego-network difference and how it relates to interpersonal political discussion and cross-cutting exposure. It then discusses how ego-network difference could relate to affective polarization both directly and indirectly. Presentation of method and data analysis follows. General implications of the findings are discussed at the end.

Ego-Network Difference and Its Implications on Political Communication

Social networks are developed by people living their life as a family and clan members, organization workers, friends, neighborhood residents, and so on. When deciding where to work, whom to befriend, and where to live, a person might not perceive politics as a major consideration. People develop friendships and connections with others holding different political views. Therefore, a degree of heterogeneity in political views normally exists in people's social networks (Huckfeldt, Johnson, & Sprague, 2004; Scheufele et al., 2004).

People are likely to be aware of the differences that exist in their networks. Even without frequently engaging in talks specifically about politics, information about a friend's political stance may be available through occasional remarks made during conversations. People may also learn about political views of their associates by observation. As Huckfeldt and Sprague (1995) explicated, people can get a sense of the general political outlook of their local community through impersonal communications such as the bumper stickers their neighbors put up during election campaigns. Similarly, people can discern their friends' and colleagues' political views through similar observations. Perceptions of others' viewpoints might not always be accurate (Wojcieszak & Price, 2012a). However, as long as differences (or sameness) are perceived, they could influence political attitudes and behavior (Guidetti, Cavazza, & Graziani, 2016; Wojcieszak & Price, 2012b).

Studies addressing disagreement within social networks often employed the term "network heterogeneity" to refer to the presence of disagreement in a person's discussion network, that is, whether disagreement exists among people who frequently discuss politics with each other (e.g., Barnidge, Ardevol-Abreu, & Gil de Zuniga, 2016; Ekstrom, Smith, Williams, & Kim, 2020; Lu & Lee, 2020; Scheufele, Hardy,

Brossard, Waismel-Manor, & Nisbet, 2006). This study, in contrast, is concerned with the characteristics of people's social network in general. The two can differ from each other substantially. A person located within a heterogeneous social network may nonetheless choose to communicate mostly with likeminded others (Huckfeldt et al., 2004; but also see Bello & Rolfe, 2014, for a more complicated picture). In other words, depending on the type and extent of discussant selectivity, people located in a highly heterogeneous social network may nonetheless have a homogenous discussion network. The tendency of previous research to focus on discussant network heterogeneity is arguably based on the premise that heterogeneity is more likely to matter when it is activated in communication. However, there are reasons—as to be explicated later—to believe that political differences within one's social network could matter even if they are not frequently communicated. This study thus shifts the focus to people's social network at large.

Notably, the term "network heterogeneity" may be understood either from the ego's perspective or from an observer's perspective. From an observer's standpoint, heterogeneity refers to the composition of a person's network regardless of whether the person belongs to the majority or minority within the network. But from the ego's perspective, whether one belongs to the majority or minority matters. To avoid confusion, this article follows Hopp et al. (2020) and uses the term "ego-network difference" to refer to the degree to which individuals find their political views differing from those held by people in their network. Again, ego-network difference deserves attention because, with or without discussions, the sheer recognition that many friends and family members hold different views may have implications on how people think about politics.

The next section will discuss the relationship between ego-network difference and affective polarization. Here, a few hypotheses about how ego-network difference may shape political communication will be stated. First, research on the spiral of silence has pointed to people's reluctance to express their views when they are in the minority for fear of isolation (Noelle-Neumann, 1983; Scheufele & Moy, 2000). Besides, people may speak less frequently when differences exist to avoid the unpleasant experience of conflicts (MacKuen, 1990; Mutz, 2006). Both lines of research indicate that people tend to communicate mainly with likeminded others. Therefore, we can expect people who find themselves differing from their friends and family members to larger extents to engage in interpersonal political discussion less frequently. The first hypothesis is as follows:

H1: Ego-network difference relates negatively to frequency of interpersonal political discussion.

Another prominent variable in the literature on political disagreement and polarization is cross-cutting exposure (Garrett et al., 2014; Kim, 2019). Here, we expect ego-network difference to relate positively to cross-cutting exposure. When more people in a person's social network hold political views contrary to one's own, arguments and information on the other side are more likely to reach the person through impersonal communication and casual conversations (Huckfeldt & Sprague, 1995). This is the second hypothesis of this article:

H2: Ego-network difference relates positively to cross-cutting exposure.

Of course, cross-cutting exposure can also come directly from political discussion. Compared with people who do not engage in political talk, people who do are more likely to be exposed to opinions and information from the other side regardless of whether they communicate primarily with likeminded others or not. More importantly for this study, a person should be capable of conveying discordant views and information when being networked with a larger number of disagreeing others (Mutz, 2006). That is, ego-network difference should be a contributory condition (Eveland, 1997) strengthening the generally positive relationship between communication and cross-cutting exposure.

H3: Ego-network difference strengthens the positive relationship between political communication and cross-cutting exposure.

Ego-Network Difference and Affective Polarization

This article is ultimately concerned with the phenomenon of affective polarization, namely the extent to which people feel positively about the political ingroup and negatively toward the political outgroup (Iyengar, Sood, & Lelkes, 2012; Phillips, 2022; Wagner, 2021). Affective polarization differs from polarization in terms of ideological sorting or attitude extremity, though the three can be interrelated (DiMaggio, Evans, & Bryson, 1996). The concept highlights polarization as a matter of affect rooted in people's identification with their political ingroups. Affective polarization undermines trust, makes cross-party collaboration more difficult, and thus renders governance less effective (Hetherington & Rudolph, 2015).

Affective polarization and nonpolitical social interactions can influence each other. Reviewing evidences in the United States, Iyengar, Lelkes, Levendusky, Malhotra, and Westwood (2019) discussed the extent to which partisan animosity spills into various social arena, ranging from dating to neighborhood relations. Generally speaking, if partisanship begins to shape the choices people make in their daily life, people's social networks should become politically more homogeneous over time.

However, this study focuses on the implications of nonpolitical social interactions on affective polarization. Recent research on the psychology of affective polarization has highlighted dehumanization of the outgroup as a closely related phenomenon (Martherus, Martinez, Piff, & Theodoridis, 2021; Moore-Berg, Hameiri, & Bruneau, 2020). In addition, conflicts may also arise from the misperception of the outgroup dehumanizing itself (Kteily, Hodson, & Bruneau, 2016). Then, what can prevent people from dehumanizing the outgroup and misperceiving the outgroup as dehumanizing itself? One answer comes from the tradition of contact theory, which sees interactions between members of different groups as capable of helping individuals realize the common humanity among all people, reduce misunderstanding and skepticism, and generate and sustain trust (Allport, 1954; Pettigrew & Tropp, 2011). Most recently, Wojcieszak and Warner (2020) confirmed the utility of contact theory to the study of political polarization. Their experiments found that cooperative interparty and simple direct interparty contacts can reduce interparty hostility through enhancing perceived commonality between the self and the outgroup. However, negative interparty contact can increase hostility through generating anxiety and reducing empathy.

Wojcieszak and Warner's (2020) analysis of survey data also shows that, among Americans, individuals with more outparty friends exhibited lower levels of affective polarization. For this study, having a high degree of ego-network difference implies that the individual has to constantly interact with members of the outgroup. The understanding and trust developed through ordinary social life should prevent people from adopting an extreme and toxic view of the outgroup when political conflicts arise. Hence *H4* is stated as follows:

H4: Ego-network difference relates negatively to affective polarization.

Ego-Network Difference, Communication, and Affective Polarization in Contentious Times

While *H4* posits a seemingly straightforward and direct relationship between ego-network difference and affective polarization, the actual relationship between the two can be more complicated and involve a combination of direct and indirect relationships. Specifically, ego-network difference may relate to affective polarization indirectly through interpersonal political discussion and cross-cutting exposure. *H1* has already stipulated a relationship between ego-network difference and interpersonal political discussion. Here, we can consider how interpersonal political discussion may relate to affective polarization. In "normal times," there might not be specific reasons to expect sheer frequency of interpersonal political talk to relate to levels of affective polarization. However, the two may become connected with each other under a very heated political atmosphere (which fits the case of the current empirical study). In a study originally focused on social media use and polarization, Lee (2016) shows that social media use in public affairs and interpersonal political talk were related positively to polarization during the 2014 Umbrella Movement in Hong Kong. That is, a range of political communication activities can become polarizing during contentious times.

There can be several interrelated reasons for the phenomenon. In times of heightened political conflicts, politics becomes more salient (Boczkowski & Mitchelstein, 2014) and more central to people's self-conception. This could heighten people's tendency to engage in motivated reasoning (Kunda, 1990). Besides, political discourses can become more uncivil (Lee, Liang, & Tang, 2019). People could find it more difficult to sustain discussion with disagreement (Wells et al., 2017). This is also illustrated through research on political unfriending on social media (John & Dvir-Gvirsman, 2015; Kim, Jones-Jang, & Kenski, 2022; Zhu, Skoric, & Shen, 2017). Overall speaking, in times of political contention, political communication should become more likely to reinforce one's existing views, resulting in higher levels of affective polarization.

Following these considerations, interpersonal political discussion is expected to relate positively to affective polarization. Yet given this study's focus, a hypothesis about the indirect effect of ego-network difference on affective polarization is stated:

H5: Ego-network difference has a negative indirect relationship with affective polarization via frequency of interpersonal political discussion.

Much research has also been conducted on the relationship between cross-cutting exposure and polarization or attitude toward the outgroup. Theorists of deliberative democracy would argue that

discussing issues with the opposite side could foster mutual understanding and respect, if not necessarily agreement (Bohman, 1996; Gutmann & Thompson, 1998). Putting such theoretical claims to empirical analysis, Mutz's (2006) seminal work showed a positive relationship between cross-cutting exposure and tolerance as well as attitudinal ambivalence, which implies a lower degree of certainty about the other side's wrongfulness. Since then, various studies have generated similar findings about the impact of cross-cutting exposure in different settings (i.e., media exposure, social media, or face-to-face interpersonal talk) on less derogatory views about the other side (Chen, Ai, & Guo, 2022; Garrett et al., 2014; Robinson, 2010; Sheagley, 2019).

Admittedly, there are also studies showing contrary findings. Kim (2015) shows that cross-cutting exposure could weaken the relationship between selective exposure and polarization, but there was some evidence suggesting a positive relationship between cross-cutting exposure and polarization. More robust findings about the possible positive impact of cross-cutting exposure on polarization came from Bail et al. (2018) and Gill (2022), but they focused on the contexts of social media and Cable TV news, respectively, during heated political events when incivility was likely to be prominent. Although the current study also focuses on a context of a heated political contention, the more immediate social context involves family members and friends. If the cross-cutting exposure mainly involves being exposed to the views of and information from trusted others, the likelihood of cross-cutting exposure to degenerate into shouting matches should not be high. In any case, this study maintains the expectation that cross-cutting exposure should alleviate polarization. Similar to *H5*, *H6* is stated by focusing on how cross-cutting exposure might mediate the relationship between ego-network difference and affective polarization.

H6: Ego-network difference has a negative indirect relationship with affective polarization via cross-cutting exposure.

Lastly, the analysis also examines the moderating influence of ego-network difference on the relationship between interpersonal political talk and affective polarization. While cross-cutting exposure by definition involves exposure to discordant information and views, interpersonal political talk itself may include different degrees of cross-cutting exposure depending on the characteristics of one's social network, as *H3* suggested. Here, it is possible that ego-network difference could weaken the positive relationship between interpersonal political talk and affective polarization. That is, the more heterogeneous is social network, the more likely interpersonal political talk will involve communication with the opposing side. Since these disagreeing others are one's strong ties, such discussion should be less likely to lead to affective polarization. *H7* is therefore stated as follows:

H7: Ego-network difference weakens the generally positive relationship between interpersonal political talk and affective polarization.

Notably, the set of seven hypotheses from the previous sections is based on arguments that presume certain causal directions (e.g., ego-network difference being the cause of political communication behavior and affective polarization). The following analysis uses a cross-sectional data set and would not be able to resolve the issue of causal relationship. This is why the hypotheses mainly use the language of association. This point should be kept in mind when interpreting the results, and we will return to this issue

in the concluding discussion section. Considering the hypotheses together, ego-network difference is posited both as an antecedent (of interpersonal political talk and affective polarization) and a moderator of the influence of interpersonal political talk on affective polarization. But the arguments leading to the hypotheses are distinctive and not contradictory. This study is therefore interested in the multiple roles of ego-network difference in shaping affective polarization.

Method and Data

Data analyzed below came from a survey conducted in June 2020 by the Center for Communication and Public Opinion Survey at the Chinese University of Hong Kong. Hong Kong experienced the Anti-Extradition Law Amendment Bill (Anti-ELAB) movement—the largest protest movement in the city’s history—in late 2019 and early 2020 (Lee, Yuen, Tang, & Cheng, 2019). The protests created a highly contentious social atmosphere in which conflicts among friends and family members were widely reported (Choi, 2021; Kobayashi & Tse, 2021). While protest actions were subdued by the pandemic in early 2020, the tense political atmosphere continued. Around the time of the survey, occasional small-scale protests were still conducted, and the state was about to establish the controversial National Security Law.

The target population of the survey is Cantonese-speaking Hong Kong residents aged 15 or above. Sampling proceeded by generating a landline telephone number database and a mobile number database using the set of telephone number prefixes. Specific numbers were then randomly drawn from the database. For mobile phone numbers, the person picking up the call was the target respondent. For household numbers, the most recent birthday method was used to select the target respondent. A total of 1,574 interviews were completed.

The response rate was 29% following American Association of Public Opinion Research formula RR3. In the sample, 47.6% are females, 23.6% are between 15 and 29 years old, 21.2% are 60 or above, and 51.4% have tertiary education. In the corresponding Hong Kong population, 52.4% are females, 19.7% are between 15 and 29, 27.5% are 60 or above, and 32.7% have tertiary education. Similar to other political surveys in Hong Kong, older people were underrepresented in the sample, whereas highly educated people were overrepresented. There was also a higher proportion of males in the sample than in the population. When conducting the analysis, the sample was weighted according to the gender * education * age distribution of the population.

The key variables are operationalized as follows:

Affective Polarization

Since the study was about a major protest movement, affective polarization was based on people’s attitude toward the movement. Respondents were asked about their views of the Anti-ELAB movement supporters and government supporters separately using a 0–10 scale, with 0 meaning very negative and 10 meaning very positive. Affective polarization was measured by rating the respondent’s side—determined by a question about whether people supported or opposed the movement—minus the rating of the opposite side. Calculated this way, the variable had a mean of 6.05 and a *SD* of 3.37. Interestingly, 27 respondents

had a negative score. A few respondents even had scores between -8 and -10 . Although we cannot rule out the possibility of people genuinely feeling less positive toward their own side than the opposite side, the large negative scores are highly counterintuitive. In addition, all the negative scores are more than 2 *SDs* lower than the mean and hence might be considered outliers. Therefore, they were all recoded into 0 so they no longer constituted outlying values. The score signifies that these respondents did not view the opposite side more negatively than one's own side. The recoded variable had a mean of 6.136 ($SD = 3.124$); Notably, additional analysis was also conducted using the variable without the outlying values being recoded. The substantive results—in terms of support for the hypotheses—remain virtually the same).

Following this approach, only people who explicitly took side on the Anti-ELAB movement have a score. However, the Anti-ELAB movement was a highly complex event, and people's attitude could be similarly complicated (e.g., people who agreed with the movement demands might not agree with the more violent tactics). As a result, some Hong Kong citizens might choose the middle option on the 5-point Likert-scaled overall movement support question when they actually favored one side. Hence, an affective polarization score was also calculated for the "neutrals": the score is the absolute difference between their ratings of the two sides. When all respondents were included, the variable's mean was 5.36 ($SD = 3.43$). The main analysis below covers the self-professed movement supporters and opponents, but additional analysis covering all respondents was also conducted to confirm the robustness of the conclusion.

Ego-Network Difference

Respondents were asked if they had many or few (a) family members and (b) friends sharing their views of the Anti-ELAB movement. Answers were registered by a 5-point Likert scale (1 = very many; 5 = very few). The two items are only mildly correlated ($r = 0.15$, $p < .001$) because there is little reason why having friends holding contrary views should strongly relate to having family members holding contrary views. Yet both items indicate the presence of political differences in a social network. Without theorizing the difference between family members and friends, it would be conceptually more appropriate and analytically more parsimonious to use an index that could represent the overall degree of political differences in a social network. Hence, the two were averaged to represent *ego-network difference* ($M = 2.42$, $SD = 0.88$). The index was used in the main analysis. However, additional analyses using the two original items separately were also conducted to generate supplementary findings, which are also reported below.

Interpersonal Political Discussions

Respondents were asked how frequently they discussed the Anti-ELAB movement with their (a) family members and (b) friends. The answers were registered with a five-point scale ranging from 1 = rarely to 5 = very frequently. The answers were averaged to form an index representing frequency of interpersonal discussions ($r = .40$, $M = 3.06$, $SD = 1.03$).

Cross-Cutting Exposure

Respondents were asked: "Overall speaking, how frequently would you encounter views different from yours on the Internet?" Answers were registered with a five-point scale ranging from 1 = none to 5 =

very frequently ($M = 2.82$, $SD = 1.15$). Notably, the item specifies “the Internet” as the arena for cross-cutting exposure. Given the centrality of the Internet in people’s everyday life in a highly Internet-connected society such as Hong Kong, the item should be useful as a surrogate indicator of cross-cutting exposure through all arenas of social life. Yet the peculiarity and possible limitation of the item should be kept in mind.

Control Variables

Control variables used in the multivariate analysis include four demographics (age, sex, education, and family income), internal, external, and collective efficacy (each measured by agreement with two Likert-scaled items following Lee, 2006), four media use items (traditional news media use, exposure to online news outlets, use of online forums, and accessing news via social media, all measured with a 5-point scaled item), support for the Anti-ELAB movement (measured by a 5-point-scaled question), and political trust (average of trust in the Hong Kong and Chinese Central governments, both measured with a 4-point scale). Details are omitted because of space constraints.

Analysis and Findings

Ego-Network Difference, Political Discussion, and Cross-Cutting Exposure

H1 predicts a negative relationship between ego-network difference and interpersonal political discussion. Multiple regression analysis was conducted to test the hypothesis. As the first column of Table 1 shows, younger respondents, those with higher levels of family income, those with higher levels of internal efficacy, those who consumed traditional and online news media more frequently, as well as those who used social media to access news more frequently were more likely to engage in interpersonal political talk. After controlling for all these factors, ego-network difference indeed related strongly negatively with interpersonal political discussion ($b = -413$, $SE = 0.023$, $p < .001$). *H1* is supported.

Table 1. Ego-Network Difference and Communication Behavior.

	DV: Discussion	DV: Cross-Cutting Exposure	
		Model 1	Model 2
Sex	0.010 (0.038)	-0.210*** (0.048)	-0.212*** (0.048)
Age	-0.004* (0.001)	-0.006** (0.002)	-0.005** (0.002)
Education	0.007 (0.017)	0.065** (0.020)	0.065** (0.020)
Income	0.035*** (0.009)	0.030** (0.011)	0.028* (0.011)
Internal efficacy	0.125*** (0.022)	-0.006 (0.027)	-0.009 (0.027)
Collective efficacy	0.018 (0.020)	0.003 (0.026)	-0.001 (0.026)
External efficacy	-0.020 (0.032)	-0.009 (0.039)	-0.009 (0.038)
Traditional media consumption	0.057** (0.020)	0.037 (0.024)	0.038 (0.024)
Online media consumption	0.103*** (0.021)	0.088** (0.028)	0.088** (0.028)
Online forum use	0.015 (0.018)	0.028 (0.023)	0.034 (0.023)
Public affairs social media use	0.071*** (0.018)	0.200*** (0.023)	0.194*** (0.023)
Movement support	0.037 (0.025)	-0.039 (0.031)	-0.034 (0.031)
Political trust	-0.012 (0.042)	0.026 (0.052)	0.027 (0.052)
Ego-network difference	-0.413*** (0.023)	0.089** (0.034)	0.109** (0.035)
Interpersonal discussion		0.179*** (0.033)	0.190*** (0.033)
Ego-network difference X Interpersonal discussion			0.083** (0.025)
Adjusted R^2	0.401***	.248***	.253***
N	1,532	1,512	1,512

Notes. Entries are unstandardized regression coefficients, and bracketed numbers are robust standard errors (HC3). Missing values in the age and family income variables were replaced by means. Missing values in other variables were deleted listwise. Largest VIF for the model in the third column is 4.17 (for political trust). *** $p < .001$; ** $p < .01$; * $p < .05$. The interaction term was centered on means.

If disagreements among family members and friends were used separately, we would see that both variables could predict frequencies of interpersonal political discussion significantly ($b = -.201$, $SE = 0.017$, $p < .001$ for difference among family members, and $b = -.224$, $SE = 0.021$, $p < .001$ for difference among friends).

$H2$ and $H3$ are concerned with the predictors of cross-cutting exposure. The second and third columns of Table 1 present the results of the relevant multiple regression analysis. The second column shows that people with higher educational and income levels, younger people, males, consumers of online news media, and people who used social media to access news were more likely to have come across views different from theirs. More importantly, ego-network difference related significantly positively to cross-cutting exposure, though the coefficient is small ($b = -.089$, $SE = 0.034$, $p < .01$). $H2$ is supported.

Meanwhile, the second column also confirms the expectation of an overall positive relationship between interpersonal political discussion and cross-cutting exposure. Nonetheless, $H3$ predicts ego-network difference to strengthen this positive relationship. In the third column of Table 1, the interaction effect between ego-network difference and interpersonal political discussion is indeed positive and significant ($b = .083$, $SE = 0.025$, $p < .01$), that is, the generally positive relationship between interpersonal political discussion and cross-cutting exposure would become even stronger when degree of ego-network difference is higher. $H3$ is therefore supported.

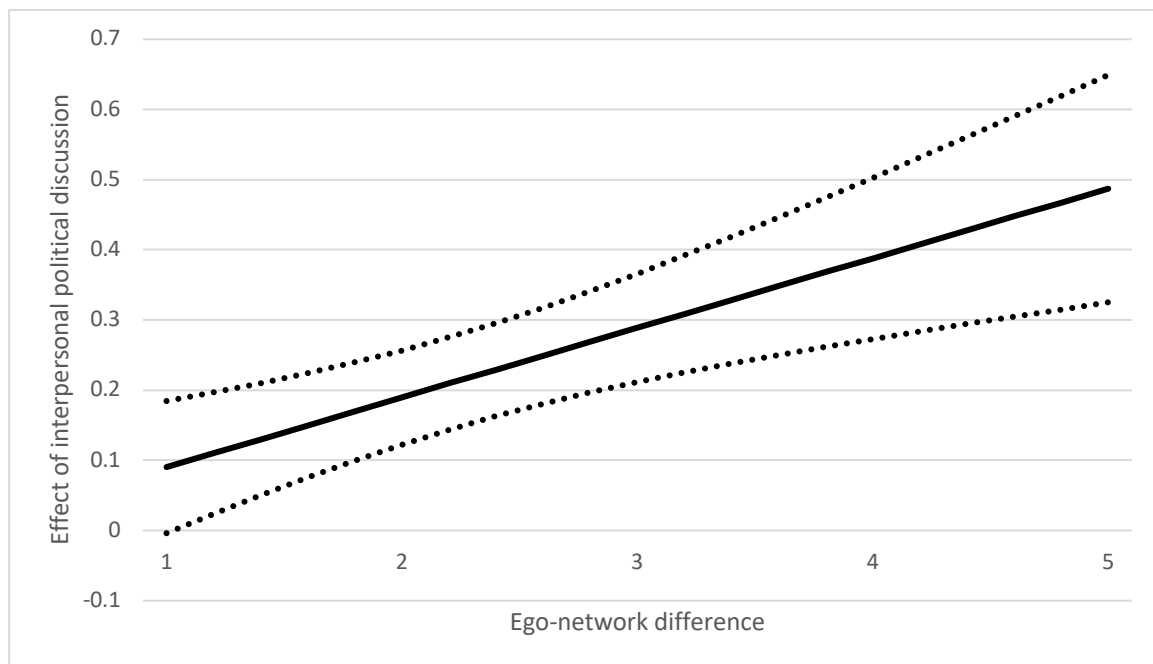


Figure 1. Effects of interpersonal political discussion on cross-cutting exposure at different levels of ego-network difference.

Further analysis using PROCESS MACRO shows that the positive effects of interpersonal political discussion on cross-cutting exposure are significant at all values of ego-network difference, except 1.0 (i.e., complete homogeneity among both family members and friends). The pattern is graphically presented in Figure 1. The results confirm ego-network difference as a contributory condition (Eveland, 1997).

Additional analysis using difference among family members and friends separately finds that, when interaction terms are not yet added into the model, only difference among friends has a significant positive relationship with cross-cutting exposure ($b = .125$, $SE = 0.029$, $p < .001$). The coefficient for difference among family members is close to zero and even negative in sign ($b = -.013$, $SE = 0.023$). Nevertheless, in the full model with the interaction terms added, both interaction terms—differences among family members and friends * political discussion—obtain a significant positive coefficient ($b = .062$, $SE = 0.005$, $p < .01$, and $b = 0.054$, $SE = 0.025$, $p < .05$, respectively). The substantive conclusion remains the same.

Predicting Affective Polarization

H4 to *H7* are concerned with the predictors of affective polarization. Table 2 summarizes the analysis for movement supporters and opponents only. The first column shows that older people, less educated people, respondents with higher levels of internal and external efficacy, people with lower levels of collective efficacy, movement supporters, people who consumed traditional news media to lesser extents, and online media consumers, as well as forum users exhibited higher levels of affective polarization. After controlling the other factors, ego-network difference was highly significantly and negatively related to affective polarization ($b = -.543$, $SE = 0.099$, $p < .001$).

Table 2. Predicting Affective Polarization (for Movement Supporters and Opponents Only).

	Model 1	Model 2	Model 3
Sex	0.101 (0.151)	0.040 (0.149)	0.046 (0.149)
Age	0.021*** (0.006)	0.024*** (0.005)	0.023*** (0.006)
Education	-0.176** (0.063)	-0.178** (0.062)	-0.177** (0.063)
Income	0.008 (0.034)	-0.010 (0.034)	-0.006 (0.034)
Internal efficacy	0.601*** (0.091)	0.522*** (0.091)	0.529*** (0.092)
Collective efficacy	-0.197* (0.076)	-0.211** (0.075)	-0.216** (0.075)
External efficacy	0.620*** (0.148)	0.585*** (0.149)	0.577*** (0.149)
Traditional media consumption	-0.147* (0.071)	-0.179* (0.070)	-0.181* (0.070)
Online media consumption	0.153 (0.083)	0.099 (0.082)	0.093 (0.082)
Online forum use	0.165* (0.069)	0.154* (0.068)	0.146* (0.068)
Public affairs social media use	0.079 (0.070)	0.049 (0.071)	0.058 (0.071)
Movement support	0.720*** (0.127)	0.718*** (0.126)	0.716*** (0.126)
Political trust	-0.263 (0.216)	-0.196 (0.210)	-0.190 (0.212)
Ego-network difference	-0.544*** (0.099)	-0.253* (0.110)	-0.266* (0.108)
Interpersonal discussion		0.705*** (0.106)	0.667*** (0.108)
Cross-cutting exposure		-0.074 (0.076)	-0.064 (0.076)
Ego-network difference X Interpersonal discussion			-0.176* (0.086)
R ²	.201***	.233***	.235***

Notes. Entries are unstandardized regression coefficients, and bracketed numbers are robust standard errors (HC3). Missing values in the age and family income variables were replaced by means. Missing values in other variables were deleted listwise. Largest VIF for the model in the third column is 4.12 (for political trust). $N = 1,253$. The interaction term was centered on means. *** $p < .001$; ** $p < .01$; * $p < .05$.

Interpersonal political discussion and cross-cutting exposure, the two proposed mediators, were then added into the model. The second column shows that the explanatory power of ego-network difference declined quite substantially, as the effect size was reduced from -0.543 to -0.253 . Nevertheless, the coefficient remains statistically significant. That is, there was indeed a direct relationship between ego-network difference and affective polarization. At the same time, interpersonal political discussion was indeed strongly and positively related to affective polarization, but cross-cutting exposure did not relate significantly to affective polarization. Further analysis using PROCESS MACRO confirms that both the direct effect of ego-network difference and the indirect effect through interpersonal political discussion are statistically significant (direct effect = -0.388 , $SE = 0.103$, $p < .001$; indirect effect through interpersonal political discussion = -0.228 , $SE = 0.047$, 95% CI [-0.325 , -0.140]). The indirect effect through cross-cutting exposure is also negative in sign, but it is nonsignificant (indirect effect = -0.017 , $SE = 0.013$, 95%CI [-0.045 , 0.005]). $H4$ and $H5$ are supported, but not $H6$.

An interaction term was then added to examine $H7$. The third column of Table 2 shows that the interaction term indeed obtained a negative and significant coefficient ($b = -0.176$, $SE = 0.086$, $p < .05$). The negative sign of the coefficient suggests that the generally positive relationship between interpersonal political discussion and affective polarization would be weakened when ego-network difference is larger. This is consistent with $H7$.

Analysis using PROCESS MACRO shows that the effect of interpersonal discussion on affective polarization would be reduced from 0.692 to 0.441 (both significant at $p < .001$) when we move from respondents scoring 1 SD above mean to 1 SD below mean on ego-network difference. As Figure 2 illustrates, interpersonal political discussion would cease to relate to affective polarization significantly positively for people scoring above 3.74 , which means scoring 4 or above given the current operationalization on ego-network difference. In the sample, 6.7% of the respondents had such scores on ego-network difference.

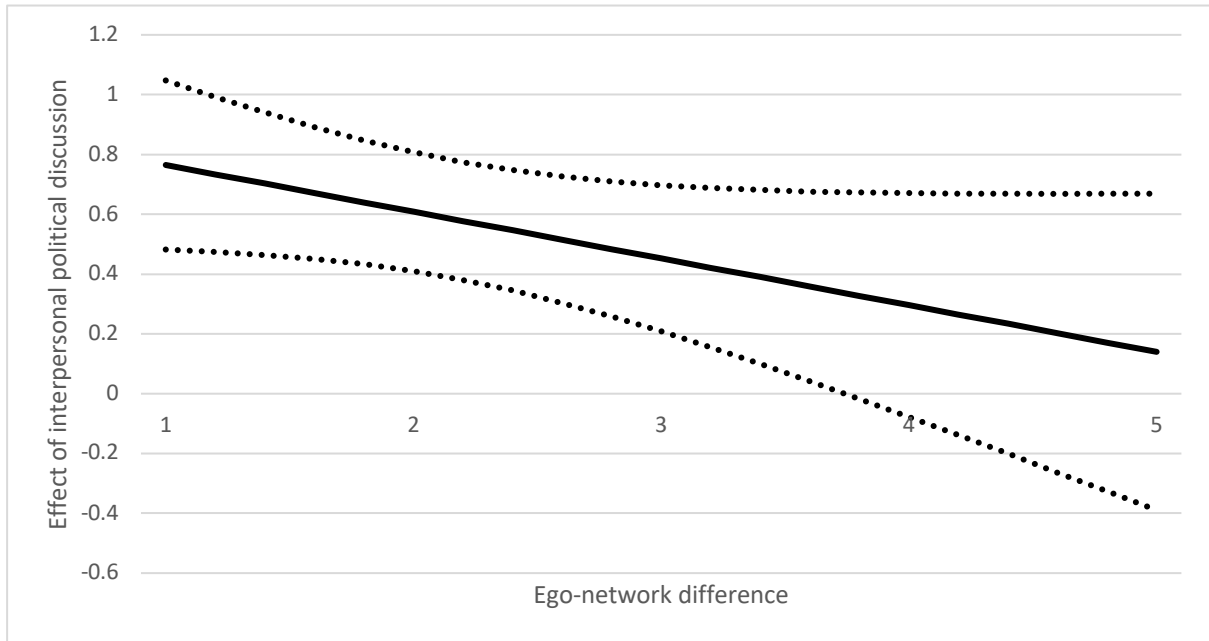


Figure 2. Effects of interpersonal political discussion on affective polarization at different levels of ego-network difference.

Table 2 uses the affective polarization variable on which only movement supporters and opponents had a score. Table 3 summarizes the key results when the affective polarization variable for all respondents was used. The direct effect of ego-network difference and indirect effect through interpersonal discussion remain highly significant, but the interaction effect fails to attain statistical significance. The pattern of results is largely the same, despite the lack of consistent support for *H7*.

Table 3. Predicting Affective Polarization (All Respondents).

	Model 1	Model 2	Model 3
Ego-network difference	-0.855*** (0.094)	-0.502*** (0.103)	-0.527*** (0.102)
Interpersonal discussion		0.855*** (0.096)	0.841*** (0.097)
Cross-cutting exposure		-0.064 (0.072)	-0.056 (0.072)
Ego-network difference X Interpersonal discussion			-0.100 (0.073)
R ²	.273***	.311***	.311***

Notes. Entries are unstandardized regression coefficients, and bracketed numbers are robust standard errors (HC3). The regression models contain all control variables, but the results are omitted. Missing values in the age and family income variables were replaced by means. Missing values in other variables were deleted listwise. *N* = 1,499. The interaction term was centered on means. *** *p* < .001; ** *p* < .01; * *p* < .05.

Further analysis using differences among family members and friends separately would show that, when only movement supporters and opponents were examined, both differences among family members and friends would have a significant main effect coefficient in the full model, that is, the model equivalent to the last column of Table 2 ($b = -0.250$, $SE = 0.064$, $p < .001$ and $b = -0.362$, $SE = 0.086$, $p < .001$, respectively). Regarding the interaction effects, both difference among family members * political discussion and difference among friends * political discussion obtain a negative coefficient, but both coefficients fall short of being statistically significant ($b = -0.035$, $SE = 0.062$ and $b = -0.053$, $SE = 0.073$, respectively). Again, the main and direct effect of ego-network difference on affective polarization is robust, while support for $H7$ is more dependent on model specification and variable construction.

Concluding Discussion

This study is interested in the implications of ego-network difference, understood as the presence of (perceived) disagreement in a person's social network regardless of his or her engagement with the disagreeing views, on affective polarization in a highly contentious context. The findings point clearly toward the capability of ego-network difference to mitigate the problem of polarization. First, it related directly negatively to affective polarization. This article expects such a relationship based on contact theory (Pettigrew & Tropp, 2011): People develop trust and understanding with others in their networks through constant interactions, and they are less likely to adopt a dehumanizing perspective toward the political outgroup when many of their trusted friends and family members also belong to it.

Second, ego-network difference had an indirect negative relationship with affective polarization through frequencies of interpersonal political discussion. This indirect relationship is built on the basic tendency for people to avoid the unpleasant experience of conflict. Hence ego-network difference relates negatively to frequency of political discussion. During contentious times, political discussion indeed tends to polarize. Combined together, ego-network difference thus alleviated affective polarization through suppressing frequencies of discussions.

Third, ego-network difference moderated the relationship between interpersonal political discussion and affective polarization such that interpersonal discussion would not relate significantly positively to affective polarization for people who were the minority in their social networks. This is in line with the idea that discussing with disagreeing others might help generate mutual understanding and/or tolerance (Mutz, 2006).

Admittedly, the study failed to find support for the mediating role of cross-cutting exposure. Although ego-network difference was indeed found to generate cross-cutting exposure and strengthen the relationship between political discussion and cross-cutting exposure, cross-cutting exposure itself did not relate significantly to affective polarization. One possible reason is the limitation of the surrogate measure, which focuses on cross-cutting exposure via the Internet instead of focusing on cross-cutting exposure from more interpersonal contexts. People could have received disagreeing messages and information from a wide range of sources via the Internet, and not all cross-cutting exposure is equally depolarizing. The latter contention is consistent with the literature, which had also shown that cross-cutting exposure might depolarize or further polarize under different conditions (e.g., Bail et al., 2018; Kim, 2015; Sheagley, 2019).

The weakness of the finding regarding cross-cutting exposure does not diminish substantially the significance of the findings regarding ego-network difference. On the whole, affective polarization is found to be lowest for individuals who were tied to disagreeing others and did *not* engage in interpersonal political discussion. In one sense, communication researchers have tried hard to examine what kinds of communication behavior may help alleviate the problem of communication (e.g., with or without cross-cutting exposure and among strong or weak ties). But rarely would researchers acknowledge that, at least when the social and political atmosphere is very heated, reducing the amount of communication may be the best way to prevent further conflicts and hostility. This can be seen as another rendition of a democratic paradox similar to the one articulated by Mutz (2006). Discussing politics is supposed to be a way for people to engage with public affairs, and it can facilitate political learning and participation. But under certain circumstances, political discussion can also aggravate the problem of political division and polarization.

Certainly, this study's findings should not lead one to recommend retreat from political discussion in general as a cure to the problem of polarization. The more important point made by this study is that extent of affective polarization during times of conflict is dependent on characteristics of social life in noncontentious times. Understanding the political significance in ordinary social life is one reason to shift our attention from discussant network heterogeneity to ego-network difference. If politics does not constantly occupy people's thoughts and people interact with a wide range of individuals in various social settings, they will develop networks where a significant degree of political disagreement exists (Huckfeldt et al., 2004). The result is a social fabric in which group affiliations and identities crisscross each other. This constitutes a buffer against toxic polarization during political contention. Therefore, more contact and communication across lines of differences during noncontentious times should be desirable. This is why social sorting (Mason, 2016) and the politicization of everyday life (Lee, 2021) can be troublesome concerns. The convergence of lines of social, cultural, and political differences and the increasing salience of political matters in social life can make affective polarization particularly intractable.

A note on causal direction should be added here. While the above interpretation treats ego-network difference as the "cause" of lower levels of affective polarization, one might wonder if affective polarization might have implications on the composition of a person's social network. Indeed, affective polarization might lead people to unfriend those with dissonant views on social media (John & Dvir-Gvirsman, 2015) and stop interacting with members of the political outgroup in their own networks (Kobayashi & Tse, 2021). A person's social network could become more politically homogeneous in the long run. Nevertheless, this phenomenon could occur only if a high level of affective polarization and the salience of political factors in people's lives persist for a long time. This does not seem to have been the case for Hong Kong in the immediate years before the 2019 protest movement. Instead, it is generally acknowledged that, before the onset of the Anti-ELAB Movement, the social atmosphere was not particularly politicized, and the pro-democracy movement was in a period of abeyance (Lee, Yuen, Tang, & Cheng, 2019).

In addition, if affective polarization shapes people's social network, the impact should be significantly stronger for friendship network than for family network. After all, people can choose who to befriend and unfriend relatively easily, but they cannot choose their parents, children, and siblings. Nonetheless, it was reported earlier that, when ego-network difference was replaced by disagreement among friends and disagreement among family members, the two variables had more or less the same

relationship with affective polarization. This pattern is more explicable when affective polarization is posited as the result.

The above does not deny the fact that, in a highly contentious environment, conflicts can arise even among the closest of friends and family members (Choi, 2021). Besides, while interpersonal discussion did not lead to polarization among people who were connected mostly with disagreeing others in their social networks, it did not depolarize either.

One point to note about this study's finding is that it is based on an examination of differences between the respondents and their family and friendship networks. The latter tend to be strong-tie connections with the respondents. Research has shown that people are generally more willing to consider disagreement and discordant information coming from strong ties more seriously (Kligler-Vilenchik, 2021; Zhu & Skoric, 2021). This helps explain the study's findings and also points to the possibility that the implications of ego-network difference may not be entirely the same if one considers a broader network encompassing a larger proportion of weak ties, such as the networks people create via social media platforms. This could be an important issue for future research.

Meanwhile, this study can be considered as having extended the study of affective polarization beyond how existing social and political groups—partisans, ethnic groups, etc.—perceive each other. Although movement supporters and opponents can be expected to have come primarily from contrasting sides of the political divide, they were emerging entities tied to the happening of the protest events instead of well-established groups. This study shows that the concept of affective polarization can be usefully applied in such situation.

Finally, two other issues that future research can attend to can be noted. First, this study measured ego-network difference by focusing on differences in opinions toward a social movement. While this measure fits the need of the present study, measures that incorporate differences between the ego and the network in multiple dimensions (Hopp et al., 2020) could be used to examine implications of ego-network difference on a broader range of issues and situations. Second, this study emphasizes the significance of political context in shaping the relationship between political communication and affective polarization. Yet the influence of social and political contexts can be directly examined only through comparative research. Comparative analyses across countries or across time points would be needed to put some of the arguments and assumptions to test.

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