

## Threats, Emotions, and Affective Polarization

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*Why do some individuals feel hostility and express bias against supporters of other political parties? Drawing on intergroup threat theory, we examine the role of emotions as a mechanism by which perceived threats against the ingroup are a source of increased affective polarization. In two survey experiments performed in the multiparty contexts of Sweden (N = 505) and Germany (N = 776), we manipulated intergroup threat using simulated online media, presenting participants with content related to immigration, and measured affective polarization using ratings of ingroup and outgroup supporter traits and feeling thermometers. Compared to a control condition, the threatening content evoked fear, anxiety, and anger among participants. However, only when individuals reacted to the threatening content with anger was increased affective polarization observed, in line with research showing that anger is a high-arousal emotion related to an increased reliance on stereotypes. We conclude that individuals distance themselves from supporters of opposing political parties when they perceive a threat to their ingroup and subsequently react with anger. The findings contribute to the literature on affective polarization by stressing the role of emotional reactions to intergroup threat.*

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**KEY WORDS:** affective polarization, social identity, intergroup threat, emotions, multiparty systems

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Why do some individuals feel hostility and express bias against supporters of other political parties? Research on affective polarization, the tendency to view copartisans positively and opposing partisans negatively (Iyengar & Westwood, 2015), has grown rapidly, with numerous studies measuring and confirming the phenomenon in an increasing number of contexts (e.g., Gidron et al., 2020; Hartevelde, 2021; Iyengar et al., 2019; Reiljan, 2020; Renström et al., 2022; Wagner, 2021). However, there is a need for a better understanding of the psychological factors that influence individuals' tendencies to distance themselves from other political groups and their members. Given that affective polarization is a form of intergroup differentiation (Iyengar et al., 2019), we draw on intergroup threat theory (Stephan et al., 2015) to provide a better

understanding of what drives affective polarization. According to this theory, perceived threats against the ingroup strengthen social identification and may lead to increased intergroup differentiation (Riek et al., 2006). When perceived threats connect to partisan divisions, affective polarization may emerge among parties along these lines of conflict (Renström et al., 2022).

We elaborate on the causal mechanism underlying a potential relationship between perceived intergroup threat and affective polarization, responding to calls in political psychology stressing the need to focus on emotional reactions (e.g., Brader & Marcus, 2013; Houghton, 2009; Lambert et al., 2019), and the research showing that anger is related to affective polarization (Webster et al., 2022). To understand when affective polarization manifests as a consequence of threat, we extend work on emotions as mediating factors in the relationship between threat and political behavior. Specifically, we examine the proposition that perceived intergroup threat should lead to negative emotional reactions, such as fear, anxiety, and anger (Seate & Mastro, 2016; Stephan & Stephan, 2017), which in turn may provoke affective polarization. Hence, an important contribution of this article is that the emotional response constitutes an important pathway through which threats can manifest as partisan divisions.

To examine this question, we explore the consequences for affective polarization among partisans when immigration—a policy issue that defines intense conflict within many party systems—is framed as a threat that could be linked to conflict with political opponents. Populist and nationalist parties throughout Europe often emphasize the threat posed by immigration (Carter, 2018). These parties stress ideas of nativism, creating an “us” versus “them” divide between natives and non-natives, which fosters perceptions of competition between these groups. This discourse is important for understanding affective polarization, as it creates a dichotomy between “the people” and the “elite,” with the latter representing mainstream and governing parties that are perceived to pursue policies that are against the people’s interests (Harteveld et al., 2021; Rydgren, 2007). Research has shown that rising levels of immigration in Europe have also led voters to exhibit anger (Tharoor, 2018) and that populist rhetoric also increases anger (Marx, 2020). Thus, it is plausible to expect that those who perceive immigration to be a threat to their own group should be more hostile and biased toward parties that may be perceived to facilitate liberal immigration policies.

Empirically, this article contributes to a rapidly growing literature expanding comparative research on affective polarization to multiparty contexts outside the United States (e.g., Gidron et al., 2020; Harteveld, 2021; Knudsen, 2021; Reiljan, 2020; Renström et al., 2021; Ryan, 2023; Wagner, 2021), using survey experimental data collected in two Western European multiparty systems, Sweden and Germany. These countries display levels of affective polarization that are moderate to high compared to other Western European countries (Reiljan, 2020). The experimental treatment manipulates potentially threatening stimuli using online media, specifically the format of a message on the topic of immigration on the social media platform Twitter. Affective polarization is the tendency to view copartisans positively and opposing partisans negatively (Iyengar & Westwood, 2015) and can be measured in different ways (Druckman & Levendusky, 2019) using measures that capture such intergroup differentiation and biased attributions. Thus, to assess an individual’s degree of affective polarization, we employ a measure mainly used in the U.S. literature, which is based on questions in which participants rate the parties’ supporters on various traits such as intelligence, honesty, open-mindedness, selfishness, and hypocrisy (Druckman & Levendusky, 2019; Garrett et al., 2014; Iyengar et al., 2012). Additionally, we also employ feeling thermometers, which are commonly used in the literature (Gidron et al., 2022).

Our results show that individuals exposed to a message framing immigration as threatening are more likely to become affectively polarized, conditional on experiencing anger, an

emotion that previously has been connected to affective polarization (Webster et al., 2022). We do not find similar effects for fear or anxiety. Hence, although the immigration-threat condition evokes fear and anxiety, these emotions do not facilitate the translation of the threat of the immigration issue into the partisan hostilities associated with affective polarization. We interpret this as in line with psychological literature showing that anger is a high-arousal emotion connected to an increased reliance on stereotypes (e.g., Carver & Harmon-Jones, 2009) and with political psychology research on the connection between anger and affective polarization (Webster et al., 2022). Fear and anxiety, in contrast, have been shown to increase cognitive processing (Lerner & Keltner, 2001; Marcus et al., 2000; Valentino et al., 2008). Hence, anger responses may explain the conditions under which affective polarization—a form of group stereotyping—increases.

### Theoretical Framework

#### *Affective Polarization and Social Identity Theory*

Research on the United States finds that mass polarization of partisans increasingly reflects less ideological differences and more social identity divisions, which have been accompanied by negative affective attitudes toward political adversaries (Bafumi & Herron, 2010; Iyengar et al., 2019; Mason, 2013). This literature has identified a rising tendency for affiliates of the two major parties to engage in social distancing (Iyengar et al., 2012) and partisan stereotyping (Ahler & Sood, 2018). Outside the United States, research at the mass level has found similar tendencies in multiparty democracies (e.g., Gidron et al., 2020; Hartevelde, 2021; Knudsen, 2021; Reiljan, 2020; Wagner, 2021). While this research has mainly focused on Western European democracies, some research shows that affective polarization is also present in Eastern and Southern Europe (Reiljan, 2020). Recently, researchers have also begun to explore affective polarization in other contexts. For instance, Torcal and Comellas (2022) and Segovia (2022) found that affective polarization is present in Latin American countries, such as Uruguay and Chile.

At the core of the theorizing in this literature is the importance of emotional and psychological attachments to groups (e.g., Garrett et al., 2014; Iyengar et al., 2012). These attachments can be understood in terms of social identity theory (e.g., Iyengar et al., 2019; Tajfel & Turner, 1986), which argues that an individual's social group(s) become a significant part of their self-definition through the formation of both emotional and psychological attachments to the group(s). Because group belongingness is emotionally important, individuals strive to become or stay members of valued social groups (Tajfel & Turner, 1986). As in other areas of life (Fiske, 1998; Oakes et al., 1994), the categorization of individuals into socially constructed categories based on political attitudes or partisanship facilitates general inferences about the members of these categories, even if the conclusions are incorrect (Iyengar et al., 2019).

Social groups are central to an individual's self-definition, thereby influencing emotions and behavior (Tajfel & Turner, 1986). Group membership is of such importance that even arbitrary group boundaries can elicit intergroup differentiation (Tajfel, 1970). As identification with a social group grows, individuals become increasingly motivated to defend their social identity and invest in the values and future of the group (Tajfel & Turner, 1986). As a group becomes an extension of one's identity, the desire to protect the group against external threats also increases. In political contexts, political identities such as party identities have the characteristics of group identities (Greene, 2004),

as discussed by social identity theory. Hence, the tendency to defend the group and oneself against external threats is associated with partisan hostility (Miller & Conover, 2015).

### *Intergroup Threat, Immigration, and Affective Polarization*

An extensive literature has noted the importance of threat perceptions in influencing political behavior (e.g., Lerner et al., 2003; Merolla et al., 2007; Miller & Krosnick, 2004; Skitka et al., 2006). As social groups become relevant parts of one's identity, threats directed at the group are perceived as threats directed at oneself, evoking defensive reactions.

Intergroup threat theory (Stephan et al., 2015) builds on social identity theory to describe the processes whereby threat influences intergroup differentiation. Identifying with a certain group creates positive emotions toward the group and often negative emotions toward other groups (Brewer, 1999; Haslam et al., 2010). According to intergroup threat theory, threats against the ingroup may strengthen social identification and lead to increased intergroup differentiation (Riek et al., 2006). The mere creation of groups leads to intergroup tension (Frank & Gilovich, 1988; Tajfel, 1970), which is amplified when one group perceives that another group—for example, supporters of opposing parties—challenges the own values and resources. This implies that highlighting potential threats to the ingroup may be associated with a higher-level understanding of who is responsible for the potential threat (Branscombe & Wann, 1994), such as political opponents. Threats posed by other social groups thus strengthen intergroup differentiation—ingroup liking and outgroup disliking (Mackie et al., 2000)—which is at the heart of affective polarization among supporters of political parties.

An important aspect of intergroup threat theory is that threats are *perceived* and therefore may or may not relate to an actual threat (Stephan et al., 2015). For instance, if an individual believes that an outgroup and its members can threaten their job security, this belief will influence how that individual feels about the other group, even if their job situation is unaffected by members of the outgroup (Esses et al., 1998, 2001; Stephan et al., 2015). In this way, the same stimulus may be interpreted as a threat by some individuals and not by others. Instead, what is perceived as a threat is contingent upon an individual's perception and evaluation of a situation or target. For instance, the societal issue we focus on in this study, immigration, may be a matter of concern to many, but only some will perceive messages about the potential costs of immigration as threats toward the ingroup.

These threats become relevant to intergroup distancing depending on how they are perceived and what reactions they evoke in different individuals. For example, ideological identification has been found to be related to varying perceptions of societal challenges as threats that may increase affective polarization (Renström et al., 2021). Previous literature has described that immigration is framed as a threat, part of the rising right-wing populist, “thin” ideology (Mudde, 2007; Stanley, 2008), and, within the party system, the threat is associated with parties seen as more tolerant of immigrants. According to several scholars, the populist radical right is rooted in both nativism and populism, where nativism emphasizes the threat of nonnative elements (persons and ideas) as fundamentally threatening to the nation (Harteveld et al., 2021; Mudde, 2007). However, the populist radical right also emphasizes the threat of the elite against the people, which indicates that the elite may be seen as ultimately responsible for the threat posed by the nonnative elements (Rydgren, 2007). In the populist radical-right rhetoric, the elite is presented as conspiring with “dangerous” others—i.e., nonnatives. Harteveld et al. (2021) argue that such an accusatory stance is likely to influence how supporters of populist radical-right parties view mainstream party supporters.

As a result, what is perceived as a threat and which party's supporters are associated with that threat is conditional upon the individual's convictions. Utilizing the immigration issue as

a potential threat appeal is useful due to its salience within party conflict in many political systems. Recent research shows that affective polarization is increasingly related to elite cultural conflicts, such as immigration, national identity, and multiculturalism, rather than disagreement on economic issues (Gidron et al., 2019). This seems particularly true when affective polarization concerns the populist radical right (Harteveld et al., 2021; Reiljan & Ryan, 2021). Further, the immigration messaging of the populist radical right has been specifically associated with evoking heightened negative emotions (Wirz et al., 2018), and populist rhetoric has been shown to evoke anger (Marx, 2020).

### *Emotional Mediators Between Intergroup Threat and Affective Polarization*

When potential threats are indeed appraised and evaluated to constitute perceived threats, this leads to some form of emotional reaction, be it fear, anger, or anxiety (Lazarus, 1991; Seate & Mastro, 2016; Stephan & Stephan, 2017; Witte, 1998). While the emotional reactions to threat are in the negative cluster of emotions, different emotions have diverse effects on cognition and behavior, which suggests that we need to include discrete emotional reactions as mediating variables when analyzing the impact of threat on affective polarization. Hence, we argue that even if political communications contain references to threat, the effect of threats on intergroup distancing will pass through emotional reactions.

Several authors have stressed the need for more attention to emotions in political psychological research (e.g., Brader & Marcus, 2013; Lambert et al., 2019), and recent research indicates that emotions constitute important mediating factors, necessary to consider when explaining political attitudes and behavior (Renström & Bäck, 2021a, 2021b). For example, Wojcieszak et al. (2016) find that anger and positive emotions mediate the relationship between exposure to partisan news and political participation. Similarly, Cho and Choy (2011) find that negative emotional responses, specifically fear and anger, mediate the effect of elite debate on citizens taking part in political communication behaviors. Much research by Webster and colleagues (Webster, 2020; Webster & Albertson, 2022; Webster et al., 2022) shows that anger, in particular, is related to affective polarization.

Emotions are important to political behavior because they are “modes of relating to the environment: states of readiness for engaging, or not engaging, in interaction with that environment” (Frijda & Mesquita, 1994; Keltner et al., 2014). Emotions are likely to influence action tendencies because they inform an individual about a situation and prepare the body for a certain course of action (Frijda, 1986). Hence, emotions can influence behavior, such as basic fighting or fleeing, but emotions also influence cognitive processing, which varies depending on which emotions are elicited by a certain stimulus (Izard, 2010). In the context of intergroup threat, it can thus be expected that when an individual perceives a stimulus as threatening and experience the subsequent emotions, that stimulus will influence behavior and cognition. While there is a cluster of negative emotions, much research shows that different negative emotions have qualitatively different effects on behavior and cognition (Banks & Valentino, 2012; Bodenhausen et al., 1994; Marcus et al., 2000; Merolla & Zechmeister, 2009; Sylvers et al., 2011).

Anger is one of the most well-researched emotions in psychology. Anger has been described as a goal-pursuing and approach-linked emotion, motivating action, and decreasing cognitive processing. Anger is related to physical activity and increased blood flow (“fight” response). Several studies have shown that anger leads to confrontation and approach (e.g., Carver & Harmon-Jones, 2009; Huddy et al., 2007). Especially important for the study of

ffective polarization, anger has been shown to decrease cognitive processing and increase reliance on heuristics and stereotypes (Carver & Harmon-Jones, 2009; Harmon-Jones et al., 2014), but anger also involves attributions of blame and efforts to reduce frustration from perceived transgressions, which could be directed at political groups or institutions (Allred, 1999; Keltner & Lerner, 2010; Marx, 2020). This suggests that if people become angry from a message about immigrants threatening their resources or security, they might put the blame on the immigrant-positive parties and consequently react with increased intergroup differentiation. Given that populist rhetoric has been shown to increase anger by putting the blame on the political elite (Marx, 2020), we expect a similar reaction here. Since affective polarization entails stereotyping, we expect that anger increases affective polarization (Webster et al., 2022). We thus hypothesize that *individuals who react with anger to a perceived threat will exhibit higher affective polarization.*

Two other negative emotions that have been found to be evoked by threats are fear and anxiety (Lang et al., 2000). These emotions have received some attention in political psychology (Brader & Marcus, 2013; Wagner & Morisi, 2019), but their effects on cognition and behavior in the political sphere are still relatively unexplored. Fear and anxiety are often clustered together and used interchangeably (Wagner & Morisi, 2019), even though there is some evidence that they should be treated separately (Brader & Marcus, 2013; Renström & Bäck, 2021a, 2021b). According to affective intelligence theory (MacKuen et al., 2010; Marcus et al., 2000), fear and anxiety both fall under what they label the “surveillance system.” When this system is activated, people tend to engage in more careful, in-depth information processing leading to less reliance on stereotypes. If this is the case, we would not expect fear or anxiety to increase affective polarization. Since these emotions are natural consequences of threat perceptions, we include fear and anxiety as separate constructs without specific expectations about their role.

## Methods and Data

### *Two Multiparty Contexts—Sweden and Germany*

Western democracies have seen a rapid increase in globalization and mass immigration, which many citizens can perceive as a threat (Hainmueller & Hopkins, 2014), for example, to welfare systems, culture, or citizens’ way of life. Such perceptions have been exploited especially by right-wing populist parties, with other parties often stridently advocating for a more open and diverse society. The salience of this divide can create a context for more polarized electorates. Along with the mass polarization observed in the United States, for example, party competition has shifted to become more associated with the identities surrounding authoritarian values (MacWilliams, 2016), manifesting in attitudes on immigrants, race, security, and nationalism. This has led to the growth of populist right-wing parties exploiting the backlash to globalization and traditional parties responding to competition from such parties. This study therefore focuses on investigating the role of such perceived threats, related to issues of globalization and immigration, in two multiparty contexts—Sweden and Germany. The two cases each have multiparty systems and the potential for the immigration issue to be interpreted in a similar fashion, allowing the same research design to be used in both cases. However, the two countries also provide some means to demonstrate the generalizability of the findings to multiple contexts.

The Swedish party system, resulting from a proportional electoral system, consists of eight parties with representation in the parliament, the Riksdag: the socialist Left party, the Social Democrats, Greens, Liberals, Centre Party, the conservative Moderate Party, the Christian Democrats, and the populist right-wing party Sweden Democrats. The Sweden Democrats entered parliament in 2010 and has since grown to become the third-largest party in 2018. Although Swedish politics has historically focused on a left–right dimension of competition, globalization issues and associated right-wing populism have become a major part of the public agenda, with polarization on these issues growing (Lindvall et al., 2017, p. 75).

The German parliament, the Bundestag, currently consists of six political parties: the Christian Democratic Union of Germany (CDU) and the Christian Social Union in Bavaria (CSU) forming the alliance of CDU/CSU, the Social Democratic Party of Germany (SPD), the Greens, the socialist Left party, the liberal Free Democratic Party (FDP), and the right-wing populist Alternative for Germany (AfD). The Social Democratic Party of Germany (SPD) and the Christian Democratic Union of Germany (CDU) have been the major parties since 1949. The AfD first entered the federal parliament in 2017, becoming the third-largest party. In the most recent election in 2021, they became the second-smallest party in the Bundestag. German politics has often been described as two-dimensional, with an economic left–right dimension and a cultural left–right dimension, where the latter captures issues such as immigration and law and order. According to analyses of candidate surveys in 2017, AfD takes a national-conservative radical-right position (Jankowski et al., 2019).

Previous research focusing on Sweden shows evidence of affective polarization among voters in empirical analyses relying on both like–dislike scales (Boxell et al., 2020; Reiljan & Ryan, 2021) as well as trait ratings and measures of social distancing (Renström et al., 2020). Renström et al. (2020) find that Swedish voters were significantly more likely to hold more positive views of supporters of their ingroup party than their outgroup party. The strongest biases were found when supporters of the “mainstream” parties were asked to evaluate supporters of the right-wing populist Sweden Democrats. Similarly, analyses of affective polarization in Germany show that the right-wing populist Alternative for Germany (AfD) evokes considerable affective polarization among supporters and representatives of all other parties, especially among supporters of left-wing parties (Bantel & Kollberg, 2022). These results align with more general results across several European countries. In a study on 28 European countries, Hartevelde et al. (2021) find that supporters of populist right parties are uniquely and homogeneously negative about supporters of mainstream parties and vice versa.

### *Survey Experimental Data*

We evaluate our hypotheses using survey experimental data collected in Sweden and Germany. Participants were recruited by the survey company *Enkätfabriken*. They were invited to take part in a survey about attitudes to politics and parties. In total, 1,281 participants took part in the studies, of which 505 were Swedish, and 776 were German.<sup>1</sup> A comparison

<sup>1</sup> In the Swedish data, there were 265 (52.5%) women and 240 (47.5%) men, mean age was 48 years ( $SD=18$  years, range 19–91). Education level in Sweden was as follows: 27 (5.3%) had basic schooling, 182 (36%) had upper secondary school (gymnasium), 60 (11.9%) had vocational training, 228 (45.1%) had a higher education, 8 (1.6%) had a doctorate degree. In the German data, there were 396 (53.7%) women and 341 (46.3%) men, mean age was 36 years ( $SD=16$  years, range 18–86). Education level in Germany was as follows: 1 (0.1%) had not completed basic schooling, 72 (9%) had secondary school (Hauptschule/Realschule), 23 (3.0%) had a technical diploma, 163 (21.0%) had a high school diploma, 159 (20.5%) had vocational training, 316 (40.7%) had higher education from college or university, and 14 (1.8%) had a doctorate degree.

between the sample and electoral barometers at the time is provided in the appendix (Tables A.1 and A.2). The surveys were conducted in Swedish and German. *Enkätfabriken* utilizes online panels and provides representative data (based on age, gender, and area of living). The Swedish data was collected in May 2021, and the German data was collected in February 2022. Participants were first informed about the survey<sup>2</sup> and gave informed consent by ticking a box confirming that they had understood and agreed with the information. Following the information, participants responded to questions about their political affiliation on a left–right scale and indicated their favorite party. They were then informed that they would be shown an anonymized Twitter post, which formed the basis of our experimental manipulation.

The experiment was a between-participants design with two conditions: threat or no threat, created in the platform Qualtrics. The experimental stimuli were designed to look like an anonymized tweet (see the appendix for screenshots). The tweets all focused on how immigration could constitute a threat to the majority of citizens, including threats against the police and society leaders, the tax costs for immigration, the risk of youth being recruited into gangs, and the participation of Swedish/German citizens in jihadi training camps. The nonthreatening tweets concerned other, loosely related public policy topics presented in a neutral way, for instance, where to find information about where tax money goes, where to find information about crime prevention work, and that leaders are working to analyze societal problems. We used a stimulus sampling procedure (Niemark & Estes, 1967) in which we created five threatening tweets and five nonthreatening tweets. The purpose of using several possible stimuli for one manipulation is to reduce the risk that specific attributes of any one stimuli will have unintended effects. Each participant was randomly shown one of the tweets. In the analyses, all threatening tweets were collapsed into one threat condition, and the nonthreatening tweets were collapsed into one non-threat condition.

After reading the Twitter post, participants rated their emotional reaction to the tweet. Following this, they responded to the affective polarization measures, which we elaborate on below, and they were also asked to what extent they agreed with the Twitter post, which we used to assess the perception of threat. Finally, we assessed demographics, and participants were thanked and debriefed.

### *Measuring Affective Polarization and the Independent Variables*

To assess our main dependent variable, *affective polarization*, we used two measures: trait ratings and feeling thermometers. First, participants indicated their most preferred party, which was used to identify the respondent's ingroup affiliation. Then they were asked to rate all the parties' supporters on four traits: honesty, intelligence, prejudice, and selfishness, and the question read: "To what extent do you consider supporters of the following parties to be [trait]?" with responses on a 7-point scales from 1 (*Very little*) to 7 (*Very much*).

To create mean indices of affective polarization using trait ratings in which higher values indicate more bias in favor of the ingroup, we subtracted ingroup ratings from outgroup ratings. For each participant, the differences between the preferred-party evaluation and that of all other parties are calculated for each out-party on each attribute. Averages of these differences are calculated over

<sup>2</sup> The study was carried out in accordance with national and international ethical guidelines (American Psychological Association, 2017; Swedish Research Council, 2017). The study was approved by the Swedish Ethical Review Authority, Nr: 06681–01. The survey was not preregistered.



the attributes to create an index of polarization on positive traits (honest, intelligent) and negative traits (selfish, prejudiced). The averages for the positive and the reversed negative indices result in a polarization measure for each out-party and each participant. The total polarization index is based on the mean of the differences between every participant's ingroup and outgroup ratings. Higher values on this index indicate stronger intergroup differentiation in favor of the ingroup, between the ingroup and all the outgroup parties. The polarization indices can range from  $-6$  to  $+6$ , where  $0$  indicates that the participant makes no difference between the outgroup and the ingroup. A negative value signifies outgroup preference, that is, a higher rating on the outgroup compared to the ingroup, and a positive value indicates ingroup favoritism.

To assess affective polarization with feeling thermometers, participants were asked, "What are your general feelings for supporters of the following parties?" Then each party was presented next to a thermometer going from  $0$  (*Very cold, negative feelings*) to  $100$  (*Very warm, positive feelings*). An index of affective polarization was calculated by subtracting the out-party ratings from the in-party ratings and then calculating a mean index. Again, higher values indicate more ingroup positivity.

To assess whether the tweet presented to the participant was perceived as a threat, we measure agreement with the tweet. Participants were presented with a survey item following the tweet, which read: "To what extent do you agree with the content of the tweet?" Responses were made on a 7-point scale from  $1$  (*Do not agree at all*) to  $7$  (*Completely agree*). Hence, we operationalize perceived threat as the interaction between a potentially threatening stimulus and agreement with the content.

To measure emotions, our mediating variables, we used an adapted version of the Discrete emotions questionnaire (Harmon-Jones et al., 2016) and included more emotions to capture the variations. The question read: "When you read the tweet, what emotions did you then experience?" We then listed discrete emotions in a matrix format in randomized order, and for each emotion, participants rated their experience on a scale from  $1$  (*Did not experience at all*) to  $7$  (*Powerful experience*). We created mean indices of the discrete negative emotions of anger, fear, and anxiety (see the appendix, Table A.4 for reliability scores).

We also include several control variables, age, gender, and education, and left–right position. The latter was based on the question, "Sometimes political opinions are described on a scale from left to right. Where on such a scale would you say that you are?" Answers ranged from  $1$  (*Clearly to the left*) to  $10$  (*Clearly to the right*).

## Empirical Analyses

### Descriptive Analyses

First, we tested the overall level of affective polarization in each national sample with one-sample  $t$ -tests against  $0$  (which would indicate no polarization). For both Sweden and Germany, the  $t$ -tests were significant, with strong effects. For traits:  $t_{\text{Sweden}}(469) = 26.90$ ,  $p < .001$ , Cohen's  $d = 1.14$  ( $M = 1.42$ ,  $SD = 1.14$ ),  $t_{\text{Germany}}(698) = 35.47$ ,  $p < .001$ , Cohen's  $d = 1.34$  ( $M = 1.45$ ,  $SD = 1.08$ ). For feelings:  $t_{\text{Sweden}}(469) = 37.99$ ,  $p < .001$ , Cohen's  $d = 1.76$  ( $M = 37.50$ ,  $SD = 21.26$ ),  $t_{\text{Germany}}(698) = 46.38$ ,  $p < .001$ , Cohen's  $d = 1.77$  ( $M = 38.98$ ,  $SD = 22.03$ ). Hence, overall, the participants were biased in favor of their ingroup party in both Sweden and Germany, on both our measures of affective polarization.

Figure 1 shows the mean level of affective polarization using traits in Sweden and Germany by the participant's preferred party. As can be seen, the tendencies in both countries are that the highest values for affective polarization are found among supporters of the left parties and the right-wing populist parties. Results for feeling thermometers can be found in the appendix, Figure A.1.

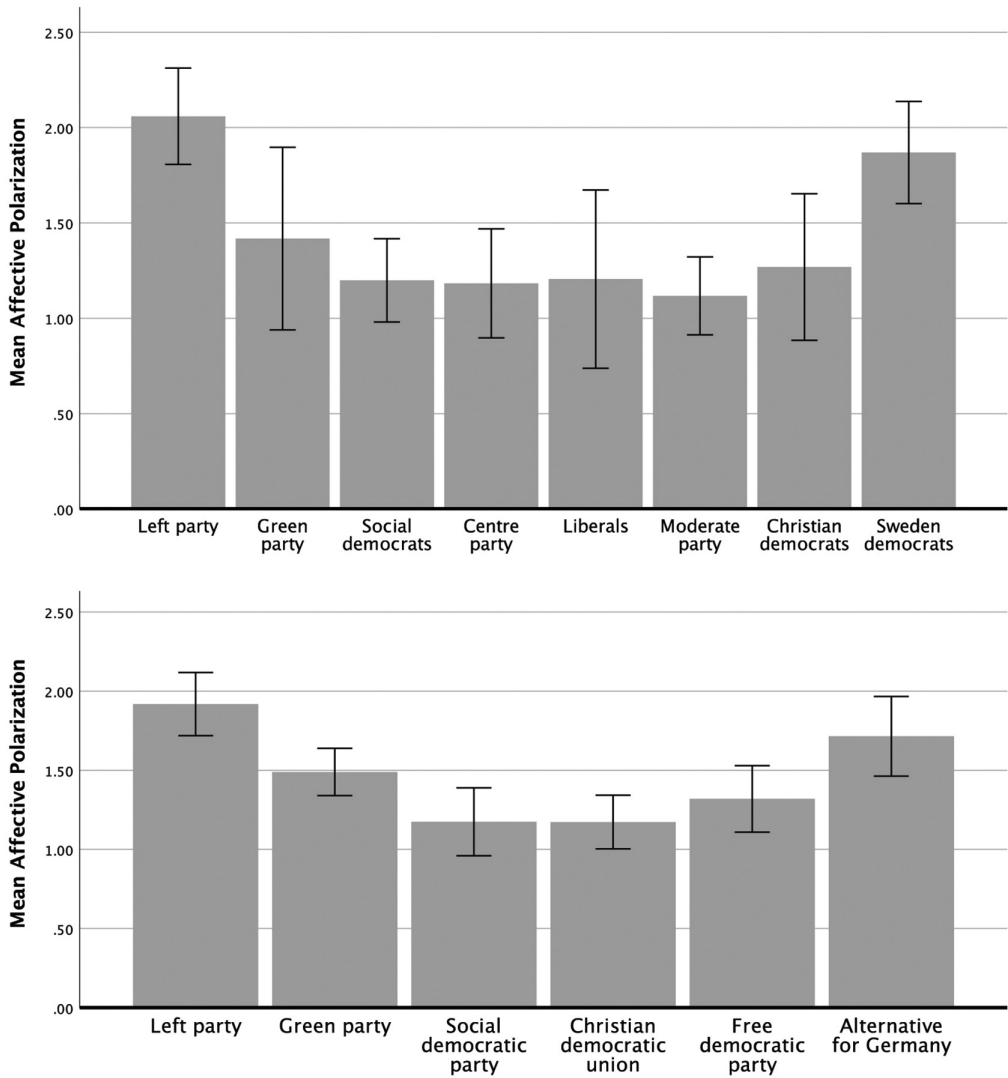
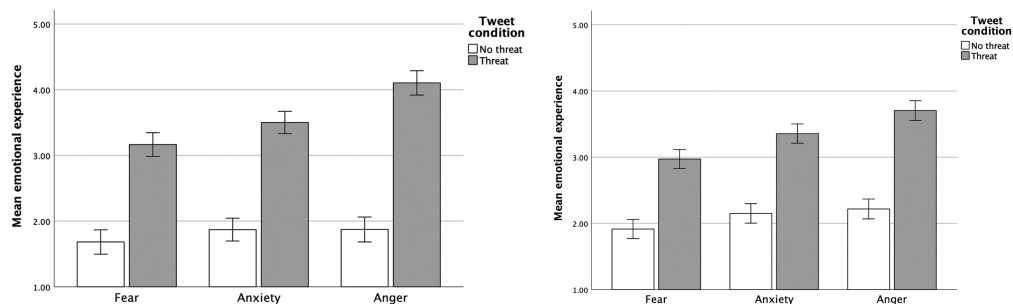


Figure 1. Affective polarization across party supporters in Sweden (upper) and Germany (lower).

*The Impact of Threat on Emotions*

Before turning to the main regression analyses, we first present results in relation to the emotional experiences following the tweet. Figure 2 shows the means of the emotion experience indices split by treatment condition for the Swedish and German samples separately. As can be seen, there were large differences between the effects of the threat and no-threat conditions on the emotional reactions. Mean differences and *t*-tests are shown in Table A.3 in the appendix. These results suggest that the manipulation, the threat-condition tweet, had the expected effect with regard to increasing fear, anxiety, and anger, in both samples.



**Figure 2.** Means for each emotional reactions split on condition. Swedish results are presented on the left-hand side and German on the right-hand side. Error bars represent 95% confidence intervals.

We next explore to what extent perceived threat was related to emotional reactions in a series of regressions. In Model 1, we include the control variables, age, gender, education, and left–right position, the threat condition, and agreement with the tweet. Model 2 includes the interaction between threat and agreement. We ran one analysis for each emotion, fear, anxiety, and anger. Results are presented in Table 1.

As expected, the threat condition, compared to the nonthreat condition, increased experiences of all emotions across both samples. Participants who encountered a tweet about a potential threat from immigration became more fearful, anxious, and angry. There were some effects of agreement on fear and anger in the Swedish sample, indicating that agreement with the tweet was related to a stronger experience of fear and anger, regardless of the threat condition.

In model 2, we added the interaction term between threat condition and agreement. The interaction was significant for all emotions, as we expected. In the threat condition, agreement with the tweet increased the experience of fear, anxiety, and anger in both samples. The interactions for anger are plotted in Figure 3. Plots of the other emotions can be found in the appendix (Figure A.2). Correlations between all variables can be found in Table A.5.

Hence, perceiving a message about immigration as threatening clearly resulted in emotional reactions among participants. The question is, did these emotional reactions also result in a higher degree of affective polarization? We next turn to this question, analyzing whether emotions, especially anger, function as a mediator between the perception of an intergroup threat and affective polarization.

### *Emotions as Mediators between Threat and Affective Polarization*

In the second step of the analyses, we ran moderated mediation models for traits and feelings separately. These models show if the interaction between threat and agreement (which we use to capture the individual experience of perceived threat) on affective polarization is mediated by negative emotions, such as anger.<sup>3</sup> As the main predictor we used the threat condition, and as the moderator we used agreement with the tweet. Even though our hypothesis suggested that anger should be a main driver of affective polarization, we used all three negative emotions—anger, fear, and anxiety—as possible mediators and affective

<sup>3</sup> We used the PROCESS macro for SPSS (Hayes, 2018), model 7.

**Table 1.** Regression Models Predicting Emotions From Threat Condition and Agreement in Sweden and Germany

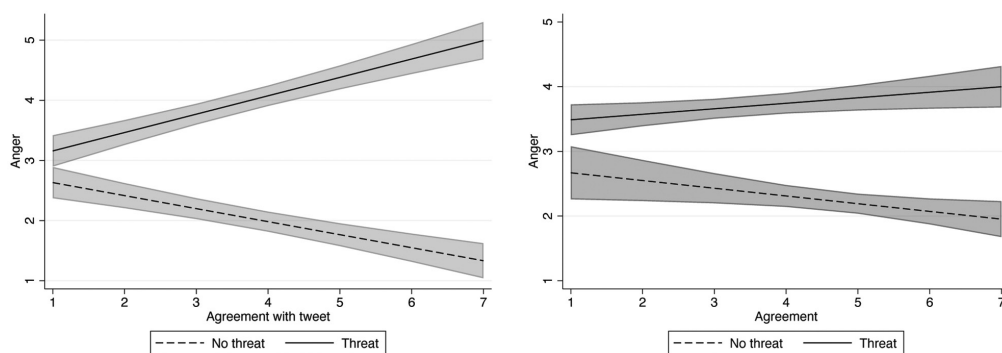
	Fear			Anxiety			Anger		
	SWE	GER	GER	SWE	GER	GER	SWE	GER	GER
	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
<b>Model 1</b>									
Age	-.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)
Gender	.02 (.13)	.34 (.11)**	.41 (.11)***	-.02 (.13)	.41 (.11)***	.41 (.11)***	-.24 (.14)	.31 (.11)**	.31 (.11)**
Education	-.03 (.03)	-.09 (.04)*	-.05 (.04)	-.02 (.05)	-.05 (.04)	-.05 (.04)	-.01 (.06)	-.02 (.03)	-.02 (.03)
Left-right	.03 (.03)	.13 (.03)***	.13 (.03)***	.05 (.03)*	.13 (.03)***	.13 (.03)***	.04 (.03)	.12 (.03)***	.12 (.03)***
Threat	1.58 (.13)***	1.09 (.11)***	1.25 (.11)***	1.68 (.13)***	1.25 (.11)***	1.25 (.11)***	2.29 (.14)***	1.40 (.12)***	1.40 (.12)***
Agreement	.10 (.04)**	.04 (.03)	.05 (.03)	.05 (.04)	.05 (.03)	.05 (.03)	.10 (.04)**	-.03 (.03)	-.03 (.03)
	Adj. $R^2 = .23$	Adj. $R^2 = .16$	Adj. $R^2 = .28$	Adj. $R^2 = .28$	Adj. $R^2 = .19$	Adj. $R^2 = .19$	Adj. $R^2 = .38$	Adj. $R^2 = .21$	Adj. $R^2 = .21$
<b>Model 2</b>									
Age	-.00 (.00)	-.00 (.00)	-.00 (.00)	-.00 (.00)	-.00 (.00)	-.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)
Gender	.05 (.13)	.33 (.10)**	.40 (.11)***	.01 (.12)	.40 (.11)***	.40 (.11)***	-.21 (.13)	.31 (.11)**	.31 (.11)**
Education	-.04 (.05)	-.09 (.04)*	-.03 (.05)	-.03 (.05)	-.04 (.04)	-.04 (.04)	-.03 (.05)	-.02 (.03)	-.02 (.03)
Left-right	.02 (.03)	.12 (.03)***	.11 (.03)***	.04 (.02)	.11 (.03)***	.11 (.03)***	.03 (.03)	.11 (.03)***	.11 (.03)***
Threat	-.23 (.33)	-.11 (.29)	.15 (.30)	-.05 (.31)	.15 (.30)	.15 (.30)	.32 (.34)	.72 (.30)**	.72 (.30)**
Agreement	-.15 (.06)**	-.13 (.05)**	-.11 (.05)*	-.19 (.05)***	-.11 (.05)*	-.11 (.05)*	-.18 (.06)**	-.13 (.05)*	-.13 (.05)*
Threat x agreement	.42 (.07)***	.29 (.06)***	.26 (.06)***	.40 (.07)***	.26 (.06)***	.26 (.06)***	.46 (.07)***	.16 (.07)*	.16 (.07)*
	Adj. $R^2 = .28$	Adj. $R^2 = .19$	Adj. $R^2 = .32$	Adj. $R^2 = .32$	Adj. $R^2 = .21$	Adj. $R^2 = .21$	Adj. $R^2 = .43$	Adj. $R^2 = .22$	Adj. $R^2 = .22$

Note: Threat is dummy coded with nonthreat as reference category (=0) and threat = 1. Gender is dummy coded with men as reference category (=0) and women = 1. \*\*\* $p < .001$ ; \*\* $p < .01$ ; \* $p < .05$ .

polarization as an outcome variable. In addition, age, gender, education, and left–right position were included as controls.

Table 2 shows the results of the regressions predicting affective polarization based on all predictors from the moderated mediation model. Although the threat condition heightens all negative emotions, anger is the only significant predictor of increased affective polarization across both samples and across both measures. In Germany, fear was also a significant predictor of affective polarization measured with traits, but it was negative such that increased fear decreased affective polarization.

To establish that a threat was perceived, we used agreement with the tweet as a moderator, where the extent of agreement with the content of the tweet would moderate the effect of potential threat on anger and then via anger on affective polarization. The index of moderated mediation was significant both in the Swedish sample for both traits, .07, BootSE=.03, LLCI=.02, ULCI=.13, and feelings, 1.36, BootSE=.56, LLCI=.34, ULCI=2.54, and in the German sample, .02, BootSE=.02, LLCI=.00, ULCI=.06, and .20, BootSE=.14, LLCI=.00, ULCI=.55, for traits and feelings, respectively. The index of moderated mediation for fear was significant for traits in the German sample,  $-.04$ , BootSE=.02, LLCI= $-.10$ , ULCI= $-.00$ . The index for anxiety was not significant in either sample. The results show that when individuals perceive a



**Figure 3.** Interactions between threat condition and agreement with the content on anger in Sweden (left-hand side) and Germany (right-hand side), with 95% confidence intervals.

**Table 2.** Regression Based on 5,000 Bootstrap Samples Predicting Affective Polarization From Emotions

	Sweden		Germany	
	Traits	Feelings	Traits	Feelings
	B (SE)	B (SE)	B (SE)	B (SE)
Age	.00 (.00)	.06 (.06)	.01 (.00)*	.19 (.06)**
Gender	-.12 (.11)	1.21 (2.06)	-.00 (.08)	-3.95 (1.75)*
Education	.01 (.04)	.42 (0.85)	.00 (.03)	-.71 (.63)
Left–right	-.04 (.02)	-.23 (.39)	-.08 (.02)***	-.57 (.47)
Threat (tweet)	-.04 (.13)	-5.32 (2.56)*	-.18 (.24)*	-1.68 (.96)
Fear	-.02 (.08)	2.73 (1.56)	-.15 (.07)*	-1.22 (1.49)
Anxiety	-.15 (.09)	-2.86 (1.78)	-.05 (.08)	-1.69 (1.64)
Anger	.16 (.07)*	2.88 (1.26)*	.15 (.05)**	2.55 (1.07)*
	$R^2 = .03$	$R^2 = .05$	$R^2 = .06$	$R^2 = .04$

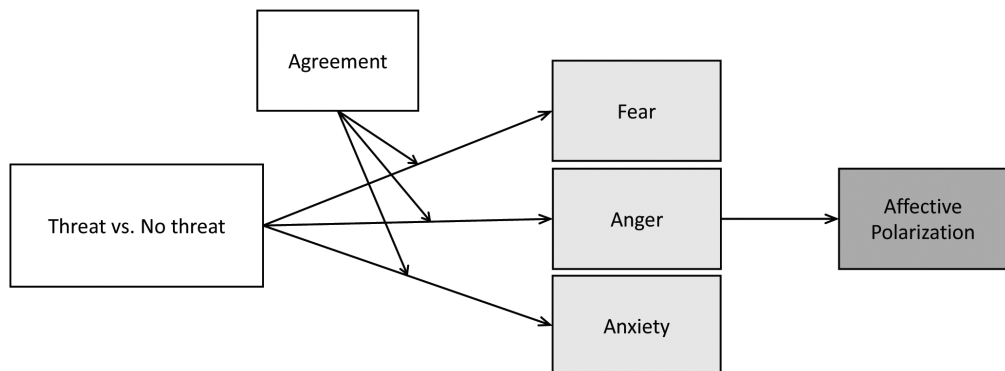
Note: Agreement is not included since it is a moderator in the overall moderated mediation model.

threat—the interaction of tweet and agreement—they become affectively polarized to the extent that they experience anger. There was also a small direct effect of threat on affective polarization measured as traits in the German sample and feelings in the Swedish, where threat decreased polarization.

Figure 4 shows the full model. All paths in the figure represent significant effects replicated in both samples for both outcomes. As can be seen in Figure 4, threat leads to an increased experience of fear, anxiety, and anger, and these effects are moderated by the extent to which the participant agrees with the content of the tweet, such that the more the participant agrees with the content, the stronger the negative emotions are experienced. Moreover, anger significantly predicts affective polarization, such that a stronger experience of anger leads to a higher degree of affective polarization. Hence, exposure to a message perceived as a threat against the own group indirectly leads to increased affective polarization via experiencing anger. This relationship is enhanced for those who agree with the threatening content. Importantly, these effects hold even when controlling for other variables that may influence this relationship.

Hence, our hypothesis that anger should mediate the impact of intergroup threat on affective polarization is supported in this analysis. That anger increases affective polarization is in line with previous research in the United States (Webster et al., 2022). Affective polarization involves a stereotyping of in- and outgroup members, either by assigning traits in a biased manner or by expressing differences in feelings. This may be why anger is an important emotional pathway through which intergroup threat leads to affective polarization. It is also important to note that anger is evoked by unfairness and is associated with blame (Allred, 1999). Hence, perceiving immigration as threatening may be associated with seeing outgroup parties as responsible for this threat, leading to anger and subsequent affective polarization (Webster et al., 2022).

Our results show that threat evoked both fear and anxiety in both samples, but that neither of these emotions increased affective polarization. However, a fear reaction showed a negative effect and thus decreased affective polarization when measured using the trait ratings (but not feeling thermometers) in Germany. One potential explanation for why fear and anxiety did not lead to increased affective polarization is that these emotions are not associated with decreased cognitive processing and increased reliance on stereotypes, which may be a condition for partisan bias and hostility to occur when perceiving a threat. Moreover, as it is suggested to be a part of the surveillance system (MacKuen et al., 2010; Marcus et al., 2000), fear has been associated



**Figure 4.** Model of the moderated mediation analyses showing significant paths. Modeling is based on 5,000 bootstrap samples.

with increased cognitive processing, which could explain why fear decreased affective polarization in Germany. However, this effect was weak and only found for trait ratings implying that the results should be interpreted with caution.

### Concluding Discussion

This article aimed to explore the conditions under which a perceived threat increases affective polarization—specifically, whether emotional reactions constitute mediators for stimuli based on political communications to evoke changes in attitudes. In our study, perceived threats increased fear, anxiety, and anger among the participants. While fear and anxiety are both associated with threats from immigration, we found that only anger significantly increased the partisan outgroup distancing associated with affective polarization following a threat perception. Hence, when individuals perceive a threat to the ingroup, they become affectively polarized conditional on experiencing anger. Because affective polarization, in essence, is a form of stereotyping (Iyengar et al., 2019), these results are in line with research showing that anger decreases cognitive processing and increases reliance on stereotypes and heuristics (Carver & Harmon-Jones, 2009; Harmon-Jones et al., 2014; MacKuen et al., 2010; Marcus et al., 2000). Our results also conform to research in the United States by Webster et al. (2022a, 2022b), which shows that anger is an emotion that strongly characterizes the political sphere in the United States and is connected to affective polarization.

An unexpected finding was that fear decreased affective polarization in the German sample for the trait ratings. Because this was only in the German sample and only for traits, we suggest that research should look more into this mechanism before drawing firm conclusions from the findings. Nevertheless, the results do align with some recent research showing that, during the COVID-19 pandemic, distress—which could be related to fear—decreased affective polarization in Germany (Jungkunz, 2021). Fear has been suggested to be part of the surveillance system (MacKuen et al., 2010), which is assumed to increase cognitive processing, information seeking, thorough evaluation (Lerner & Keltner, 2001; Marcus et al., 2000; Valentino et al., 2008), and precautionary planning (Lerner et al., 2003). Therefore, it seems plausible that fear, as defined in the context of this literature, could decrease affective polarization, reduce intergroup tensions, and facilitate cooperation.

One important implication of this research is that affective polarization is likely related to the nature of threat perceptions. The present study builds on previous work by establishing emotional reactions as one mechanism by which affective polarization may be related to perceptions of societal challenges as threats conditioned on ideological identification (Renström et al., 2021). In this study, we used the topic of immigration to present a perceived threat to the native population, building on the fact that immigration is often framed as such a threat by populist radical-right parties and groups. The implication of the experiment thus also provides some insight into how radical-right politicians can spur affective polarization in the electorate with the combination of messaging based on nativism and populism (Harteveld et al., 2021; Rydgren, 2007).

This study further extends intergroup threat theory (Stephan et al., 2015), where most research has focused on how attitudes and behavior toward a specified outgroup change when that group is framed as a threat (Esses et al., 1998, 2001). In our study, we show that when immigration is seen as a threat, this has consequences for attitudes toward partisan outgroups that form the basis of affective polarization. This may be because some parties are perceived as facilitators in the immigration issue. If immigration is seen as a threat, this will affect attitudes toward those who are seen to be responsible for the occurrence of the threat—that is, parties more tolerant of immigration. This interpretation assumes that participants are knowledgeable and capable of

using limited information on party and ideological information to make attributions as to the cause of the threat.

Even though no specific party was presented as the “sender” in our experiment, the tendency to frame immigration as threatening to the natives is mainly associated with the messaging of the populist radical right. This party group has throughout Europe successfully combined nativism and populism (Rydgren, 2007), which essentially implies that the elites are the ones facilitating the incoming immigration threat. Anger is elicited when something is perceived as unfair such as by the perception that a moral standard of fairness or justice has been violated (Hoffman, 2000). This has been referred to as moral outrage—the anger directed toward others who violate ethical values or standards (Goodenough, 1997). It is possible that the participants who experienced anger did so due to perceiving that the elite is providing immigrants with benefits at their expense, such as when tax money is seen as going to immigrants.

Such an interpretation is also in line with research showing that anger is related to blame (Allred, 1999; Marx, 2020). The fact that the supposed elite cue contained anger is important because it has been shown that elite social media messages that contain anger receive the most attention (Webster, 2021), and populist rhetoric has also been shown to evoke anger (Marx, 2020). Hence, the political elites are incentivized to post angry, populist content, increasing anger among the masses and, consequently, affective polarization. While Webster (2021) showed this relation for tweets sent by members of the U.S. Congress, we here expand on these findings and show that content alone may evoke affective polarization. Even though no party cue was presented, it could be assumed that most participants inferred that the message came from a right-wing sender. Nevertheless, an explicit party cue was not necessary for anger to be evoked and therefore blame and subsequent affective polarization to arise.

The results reinforce the importance of measuring and including emotions in models explaining political psychological phenomena, as recent work has emphasized (Brader & Marcus, 2013; Houghton, 2009; Lambert et al., 2019). In our study, framing immigration as a threat led to fear, anxiety, and anger being more strongly experienced. Yet, each of these emotional reactions diverges in how they relate to affective polarization, with only anger associated with greater partisan outgroup distancing (Webster, 2020). This finding may, as mentioned, highlight the important and distinct role anger plays in cognitive processes relevant to the study of affective polarization. An important aspect of anger is that it is elicited when something is perceived as unfair (Huddy et al., 2007; Lambert et al., 2019), meaning that there is also a target for this sense of unfairness. When immigration is perceived to threaten natives’ way of life, this unfairness may be perceived as being made possible by the political parties that are perceived as more liberal regarding immigration, leading to increased affective polarization.

Germany and Sweden are each multiparty countries with a salient cultural divide aligned with the immigration issue, yet have some differences in terms of historical experiences with immigration and the political context in which the immigration issue has become salient in the party system. That the findings are present in both cases adds to the potential generalizability of the findings. Future research should examine the potential for implications for other European systems beyond these.

A discussion of the measurement of affective polarization is also warranted. While there is not a single agreed-upon definition of affective polarization, a broad definition based on its roots in social identity theory implies that it is any form of biased intergroup evaluations based on partisanship (Iyengar et al., 2019). Because social identity is an affective process which triggers positive



feelings toward the ingroup and negative feelings toward the outgroup(s) (Tajfel & Turner, 1986), we would expect any valenced evaluations of the in- and outgroup to be based in affect by default. We here chose to use both trait ratings and feeling thermometers to measure affective polarization. Trait ratings are mainly used in studies of the U.S. context (Druckman & Levendusky, 2019; Garrett et al., 2014; Iyengar et al., 2012, 2019). Much of the research on affective polarization uses feeling thermometers (or like–dislike scales) to capture the intergroup differentiation that affective polarization implies. The use of feeling thermometers, or like–dislike scales, is widespread because they are both easy to administer and often used in major surveys such as the American National Election Studies (ANES), which facilitates analyses of development over long periods. While recent research shows that feeling thermometers capture intergroup variations (Gidron et al., 2022; Renström et al., 2022), they are also associated with more variation than the trait measure, which means that the trait measure is likely more precise (Renström et al., 2022). Nevertheless, in the present study, we see that the effects mirror each other and are comparable in size. The research field that explores individual predictors of affective polarization is still young, and a gold standard of measurement in such research is thus not yet established.

In this research, we only explored the role of the negative emotions that are typically expected to be reactions to a perceived threat. However, future research should also include positive emotions in a broader sense of exploring emotions' influence on affective polarization. Research on positive emotions and political behavior has been less common, but given that affective polarization is based in social identity theory, a theoretical point of departure will be to explore how positive intergroup contact may reduce affective polarization as postulated by the contact hypothesis (Allport, 1954). Recent research by Thomsen and Thomsen (2022) shows that intergroup contact does seem to reduce affective polarization. Similarly, Borinca et al. (2022) show that imagining positive contact with an outgroup influences intergroup support and positive emotions, and that these effects were magnified among those who most opposed the outgroups from the start.

Some limitations of this study are worth noting. First, even though we conducted the experiment in two different European multiparty contexts in an effort to reach generalizable conclusions replicable across different countries, the selected countries still only represent two multiparty contexts. Nevertheless, Sweden and Germany have similar features to many other Western European countries, such as a populist radical-right party that has gained ground and the emergence of cultural issues as more important on the political agenda. As in many other European countries, overall levels of affective polarization may be relatively low compared to the United States, but when the populist radical right is concerned, affective polarization levels are higher, both from the mainstream parties and from the populist parties (Harteveld et al., 2021).

Bergman (2020) suggests that there is an asymmetry in multiparty systems where partisans may strongly dislike some parties, while others may be viewed fairly positively. Therefore, our composite measure, in which all out-parties are collapsed, may produce weaker results. To increase effect strength, we suggest including a survey item where participants specify both their most and least preferred party, allowing for dual comparisons similar to the U.S. context. Gidron and colleagues (2019) have advanced a similar idea, arguing for analyzing pairs of parties.

In our study, we used tweets focusing on immigration as threats, with the purpose of evoking anger at the parties perceived as enabling immigration, which may imply putting blame on the political elite. While populist radical-right parties often fuse both anti-immigrant and populist antielite positions, these are not the same, and we cannot here conclude if the participants reacted to the anti-immigrant or the implied antielite position

of the tweet. Disentangling this may be difficult, however. In a recent study, Hartevelde et al. (2021) showed that the unique dislike of populist radical-right parties and the dislike of mainstream parties by their supporters can be traced to the combination of both nativist and populist ideas.

Finally, the approach taken in the analysis needs some discussion. We have used mediation analyses to explain the link between a political message and subsequent affective polarization. However, this analytical method has been discussed in the methods literature, where some claim it to be unreliable and based on unrealistic assumptions (Bullock & Green, 2021) and due to analytical restraints (Imai et al., 2010). Different approaches may further the reliability of the tested theoretical model. One way is to break the model into smaller segments and test them separately. For instance, anger can be evoked by other means and be unrelated to the political source. Gerber and Green (2012) propose a method, the implicit mediation analysis, where the treatment effect is broken down into more specific pieces and tested separately, where variations in the treatment are expected to increase or decrease the influence on the mediator. While we encourage additional testing of the theoretical proposed model, we also believe that the fact that it is replicated in two separate contexts adds some support to its validity and reliability.

To further explore the generalizability of the findings, it would also be good to test if threats experienced by other voter groups than the one targeted in this study would yield the same results. Here, we manipulated the threat of immigration, which we assumed would appeal to individuals with a right-wing-oriented ideological position. However, threats could also be directed toward left-wing-oriented individuals. Those threats would have to be formulated differently and based on what the left would see as problems that can be attributed to right-wing politics. In a recent study, Renström et al. (2021) found that individuals identifying to the left on a left–right spectrum and who were concerned about the state of the democracy displayed higher levels of affective polarization. Because radical-right populism is sometimes described as threatening the democratic system, which is something highly valued among the centrist-left parties, we could expect that manipulating a perceived threat to democracy might increase anger among individuals who are left-wing oriented, leading to affective polarization.

To conclude, we have here shown that anger plays an important role in explaining the link between threat and affective polarization. Theoretically, our findings suggest that both intergroup threat and emotional reactions to such threats are important for understanding the mechanisms behind affective polarization. Even though most measures of affective polarization are heavily reliant on feelings toward in- and outgroups, the emotional reaction to intergroup threat has not been explicitly considered in the literature. Hence, this article contributes to increasing our understanding of the psychological drivers of affective polarization. As emotional appeals have also been linked to populist communication (e.g., Wagner, 2014; Wirz, 2018), these findings illuminate the pathway by which increased emphasis on these salient divides may be associated with the affective polarization observed in Western democracies.

Practically, these findings also suggest that social media content may have the potential to polarize, even when there is no clear sender. Even though the content may be assumed to come from an author on the right side of the political spectrum, the identity of a message's sender is not necessary to induce anger and partisan intergroup differentiation. Considering the vast number of similar encounters an individual may have on an array of social media sites, this may imply a widespread influence of such communications on people's tolerance

for opposing partisans. Recent research shows that affective polarization also influences individuals' policy positions to become more extreme (Druckman et al., 2021), and those who are affectively polarized tend to become increasingly polarized when faced with in- or out-group messages (Bäck et al., 2022). Hence, it is possible that elite cues triggering anger at political opponents contribute to a negative spiral, where ideological and affective polarization may reinforce one another and become more difficult to break, posing a clear challenge to democracy.

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## Appendix A

Tables A.1 and A.2 show the distribution of the most preferred party in the Swedish and German samples, respectively, compared to national election barometers around the same time as the data was collected.

**Table A.1.** Distribution of Participants Across Most Liked and Most Disliked Party in Sweden, Including National Election Barometer Results From August, 2020

	Most Liked Party	Election Barometer August 2020
	<i>n</i> (%)	%
Left party	72 (15.3)	9.3
Green party	20 (4.0)	3.8
Social democrats	96 (19.0)	28.3
Centre party	56 (11.1)	7.6
Liberals	21 (4.2)	2.9
Moderate party	110 (21.8)	21.2
Christian democrats	31 (6.1)	5.8
Sweden democrats	64 (12.7)	19.4

Note: Election barometer results from Novus <https://novus.se/wp-content/uploads/2022/05/novusvaljarbarometer2022maj.pdf>.

**Table A.2.** Distribution of Participants Across Most Liked and Most Disliked Party in Germany, Including National Election Barometer Results From February, 2022

	Most Liked Party	National Parliament Voting Intention, February, 2022
	<i>n</i> (%)	%
The left	108 (13.9)	9.0
The greens	193 (24.9)	16.0
Social democratic party	92 (11.9)	24.0
Christian democratic	152 (19.6)	25.0
Free democratic	98 (12.6)	10.0
Alternative for Germany	67 (8.6)	11.0

Note: Results from <https://www.politico.eu/europe-poll-of-polls/germany/>.

**Table A.3.** Mean Differences and *t*-Tests Between Threat and No-Threat Conditions

	No Threat	Threat	<i>p</i> -value	Cohen's <i>d</i>
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )		
Sweden				
Fear	1.67 (1.04)	3.18 (1.73)	<.001	1.05
Anxiety	1.86 (1.13)	3.50 (1.54)	<.001	1.21
Anger	1.88 (1.22)	4.11 (1.70)	<.001	1.50
Germany				
Fear	1.91 (1.25)	2.97 (1.60)	<.001	0.73
Anxiety	2.15 (1.32)	3.36 (1.58)	<.001	0.83
Anger	2.21 (1.35)	3.70 (1.62)	<.001	1.00

**Table A.4.** Means and Standard Deviations for Items in the Emotion Indices, as Well as Index Means and Standard Deviations and Cronbach's Alpha

Index	Items	Sweden		Germany	
		<i>M</i> ( <i>SD</i> )	$\alpha$	<i>M</i> ( <i>SD</i> )	
Fear	Fear	2.62 (1.86)	0.93	2.44 (1.74)	0.91
	Alarm	2.65 (1.87)		2.73 (1.88)	
	Panic	2.12 (1.56)		2.12 (1.54)	
	Terror	2.39 (1.79)		2.54 (1.80)	
	<i>Index</i>	2.44 (1.62)		2.44 (1.53)	
Anxiety	Anxiety	2.31 (1.64)	0.94	2.54 (1.80)	0.94
	Concern	3.12 (2.02)		3.32 (2.02)	
	Unpleasantness	3.06 (2.07)		3.05 (1.95)	
	Helplessness	2.90 (1.90)		2.68 (1.80)	
	Nervousness	2.31 (1.62)		2.39 (1.65)	
	Apprehension	2.69 (1.83)		2.69 (1.85)	
	Dread	2.59 (1.77)		2.54 (1.85)	
	<i>Index</i>	2.70 (1.59)		2.76 (1.58)	
Anger	Anger	2.97 (2.06)	0.96	3.06 (2.00)	0.92
	Wrath	2.95 (2.05)		2.79 (1.97)	
	Frustration	3.35 (2.13)		3.16 (1.97)	
	Rage	2.54 (1.90)		2.84 (1.98)	
	Irritation	3.31 (2.09)		3.25 (1.97)	
	Upsettedness	3.22 (2.09)		2.79 (1.84)	
	<i>Index</i>	3.02 (1.86)		2.97 (1.67)	



Table A.5. Bivariate Correlations Between All Variables in the Study, Sweden on the Lower Part and Germany on the Upper Part

	Germany									
	Age	Gender	Edu	LR	Tweet	Agree	Fear	Anx	Ang	
Sweden										
Age										
Gender	-.04									
Educ.	-.29***	-.10**								
L-R	-.01	-.17***	-.02							
Tweet	.04	.01	.02	.05						
Agree	.05	.01	-.00	.17***	-.15**					
Fear	.01	-.01	.00	.10*	.46***	.05				
Anxiety	.03	-.02	.00	.12***	.52***	-.01	.92***			
Anger	.07	-.08	-.00	.13***	.60***	.02	.83***	.88***		
Aff.Pol.	.08	.01	-.03	-.08	-.03	.07	-.04	-.04	.03	
										.11**
										.10**
										-.05
										.18***
										.38***
										-.04
										.93***
										.83***
										.87***

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

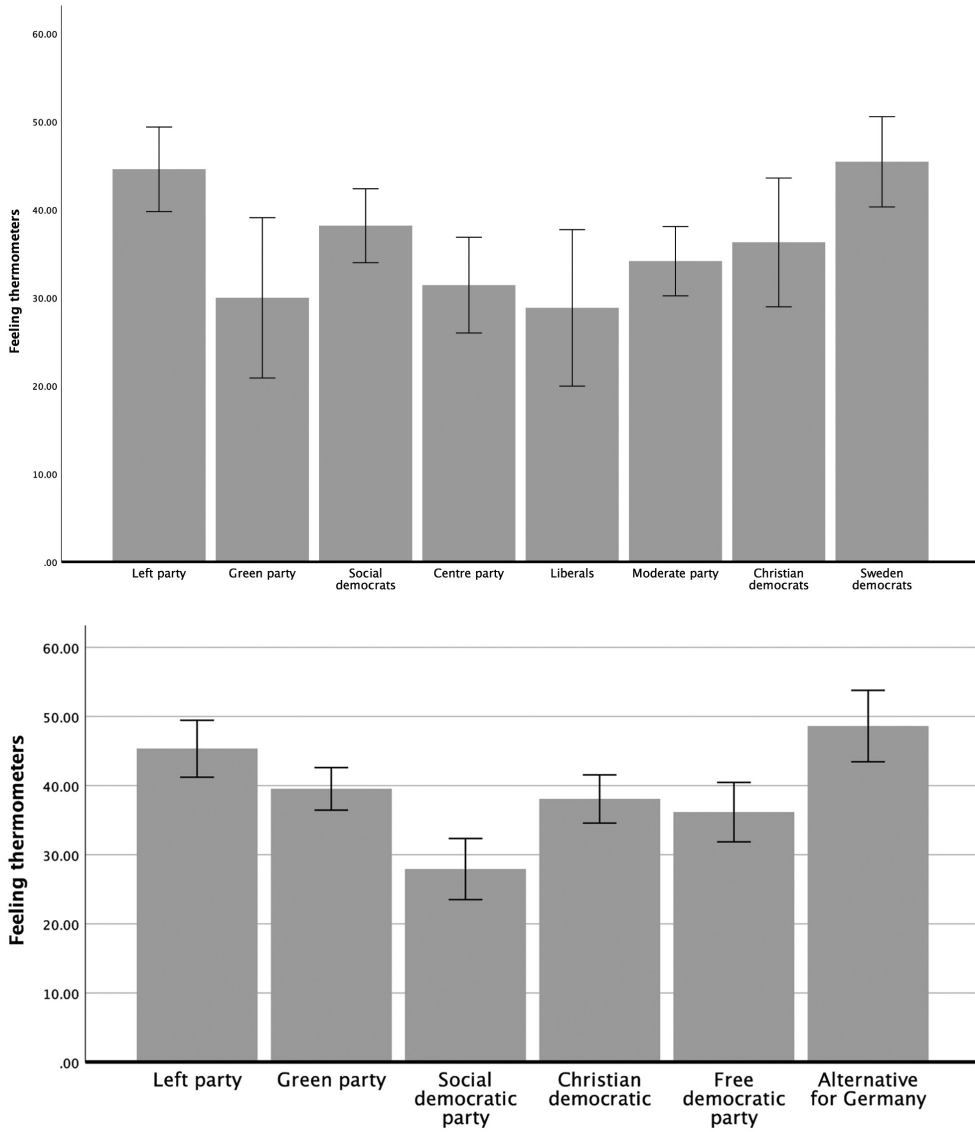
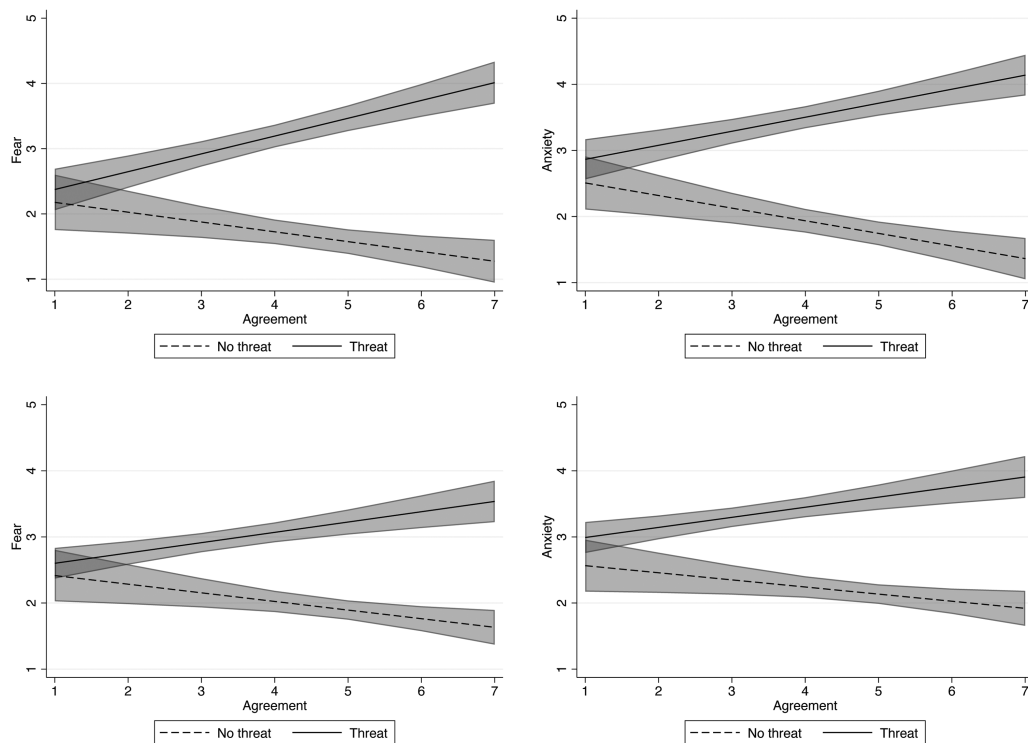


Figure A.1. Affective polarization assessed with feeling thermometers across party supporters in Sweden (upper) and Germany (lower).



**Figure A.2.** Interaction effects between agreement with the content of the tweet and threat on fear and anxiety. Top graphs show the Swedish results, and the bottom graphs show the German results.

*Screenshots of tweets and translations*



Schools in exposed neighborhoods like Rosengård and Rinkeby report that more pupils are joining gangs! Our youth are exposed to these gangs in schools and online.  
#Whereareweheading.



How much of our tax money goes to immigrants living off welfare? Is there no better way to use governmental funding?  
#taxmoney.



The police reports that the number of threats against police officers are increasing, especially in exposed areas. If not even the police can protect themselves, how can we as a society feel safe? Why is nothing done about this?

#Security.



More and more societal representatives report that they have received threatening messages after having opposed the building of new mosques.

#Whereareweheading.



Training camps for jihadis have been found in Afghanistan and young Swedish muslims go there! They will bring their violence to Sweden!

#Whereareweheading.

*Survey items*

Control variables:

Age:

“How old are you?” Open-ended response.

**Gender:**

“What is your gender?” Open-ended response.

**Education:**

“What is your highest level of education? If you have an ongoing education, you take that one.” Response options varied slightly in the different countries to accommodate the school systems.

**Political affiliation:**

“Sometimes political opinions can be placed on a scale from left to right. Where on such a scale would you place yourself?” 1 (*Clearly to the left*); 10 (*Clearly to the right*).

**Ingroup party:**

“What party do you like the most today?” The participant was presented with the parties currently in the Government and asked to pick one.

**Emotions:**

“When you read the tweet, what emotions did you then experience?”

The following emotions were presented in randomized order, and the participant indicated their emotional experience for each item on a 7-point Likert scale from 1 (*Did not experience at all*) to 7 (*Powerful experience*).

Fear, Alarm, Panic, Concern, Terror, Unpleasantness, Helplessness, Nervousness, Apprehension, Dread, Anxiety, Anger, Wrath, Frustration, Rage, Irritation, Upsettedness.

**Agreement:**

“To what extent do you agree with the content of the tweet?” Responses were made on a 7-point scale from 1 (*Do not agree at all*) to 7 (*Completely agree*).

**Affective polarization:**

Traits: “To what extent do you consider supporters of the following parties to be [honest/intelligent/prejudiced/selfish]?”

Each party was presented alongside a Likert scale from 1 (*Very little*) to 7 (*Very much*), and the participant rated each party’s supporters for each of the four traits.

Feelings: “What are your general feelings for supporters of the following parties?” Each party was presented alongside a slider from 0 (*Very cold, negative feelings*) to 100 (*Very warm, positive feelings*).