Walking in Another's Shoes: An Experimental Study on the Effects of Perspective-Taking in Decreasing Affective Polarization

By

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Abstract

Affective polarization, characterized by increased attachment to one's own political party (in-group) and heightened prejudice and hostility towards the opposing party (out-group), has increased dramatically in the United States over the past 30 years. This study explores the potential of perspective-taking as a method to decrease affective polarization and bridge the partisan divide among US citizens. To test this, the researcher deployed a randomized survey experiment to 317 participants recruited through Facebook ads. Participants were randomly assigned to treatments featuring varying stories of an out-party member aimed to induce perspective-taking (employing affective mechanisms and cognitive mechanisms). The effect of the treatments on affection polarization levels is tested using multiple linear models. The null-hypotheses could not be rejected. The findings show that perspective-taking does not reduce affective polarization levels among US partisans. Yet, the findings from this research add on to the literature of the different kinds of mechanisms through which perspective-taking operates and can inform future methods for reducing affective polarization between partisans in the United States.

Keywords: affective polarization, perspective-taking, randomized survey experiment, affective mechanisms, cognitive mechanisms, United States

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1 Introduction

1.1 Puzzle and Research Question

Has the average US citizen become more politically polarized over time? This is a question that has preoccupied political science scholars for the past few decades, but a consensus has yet to be reached. While some studies show that the ideological divide between Democrat voters and Republican voters has increased (Abramowitz and Saunders 2008), others argue that there has been no polarization among the American mass public and that the distance between voters' policy preferences has remained stable over time (Fiorina, Abrams, and Pope 2008).

Yet, there is a growing body of evidence indicating the emergence of a new type of polarization known as affective polarization, and scholars unanimously agree on its increasing pervasiveness in the US (Iyengar et al. 2019; Gidron, Adams, and Horne 2020). Affective polarization is characterized by an increasing level of attachment toward members of one's own political party (in-group), and an increasing level of prejudice and hostility towards members of the opposing party (out-group) (Iyengar et al. 2019). US partisans today are more positively biased toward their in-group and more negatively biased toward the out-group (Matthew S. Levendusky 2018b; Mason 2016). Affective polarization has not only many social and economic consequences, but it is also a threat to democratic norms and institutions (Gidron, Adams, and Horne 2020). It is particularly crucial to address in the United States where partisanship is one of the most salient social identifiers (Graham and Svolik 2020), making the negative effects of even smaller magnitudes of affective polarization felt strongly within nations.

Given the potential negative consequences of affective polarization, researchers have tried various methods to find an antidote to its effects and reduce affective polarization. According to Ahler and Sood (2018), the American public is acutely misinformed about the demographics of opposing party's partisan groups. Dispelling these false beliefs and bringing people closer to reality has been shown to offer a way to reduce the levels of affective polarization. Having people focus on their American identity instead of their partisan identity has also proven effective in reducing affective polarization (Matthew S. Levendusky 2018b). Although these methods show promise, there is another method originating in the social psychology literature, known as

perspective-taking, that has recently gained attention in the political science literature as a way to improve intergroup relations and potentially decrease affective polarization.

In its simplest definition, perspective-taking is the ability to take the perspective of another (Galinsky and Moskowitz 2000). Perspective-taking is not a new method in social science research. In fact, perspective-taking has been used as a method to reduce prejudice and improve intergroup relations across various contexts for over two decades (Batson, Early, and Salvarani 1997; Simonovits, Kézdi, and Kardos 2018; Adida, Lo, and Platas 2018; Finlay and Stephan 2000; Saveski et al. 2022). However, not all perspective-taking research is successful in accomplishing its desired positive outcomes. Some studies have shown that perspective-taking has no effect (Bor and Simonovits 2021). Others found that perspective-taking interventions can backfire, increasing prejudice and animosity between groups (Sassenrath, Hodges, and Pfattheicher 2016). Moreover, our understanding of the effects of perspective-taking in party partisan contexts is remarkably limited (Saveski et al. 2022). Most perspective-taking research has centered around testing its effects across racial groups and minority groups.

Against the backdrop of increasing affective polarization in the United States, this thesis aims to test whether perspective-taking can be used as a method to decrease affective polarization and bridge the partisan divide.

Thus, the research question is: *Can perspective-taking decrease affective polarization and bridge the partisan divide among US citizens?*

2 Literature Review & Theory

2.1 Polarization in the United States

Is America more polarized today than it was before? Before this question can be addressed, it is crucial to conceptualize the type of polarization under study, and the population among which it is observed. To begin with, the literature distinguishes between polarization in voters' issue positions and affective polarization. Additionally, there is a conceptual difference between elite polarization and polarization among the mass public.

The following section will delve into a comparative analysis focusing on polarization in issue positions between elites and the mass public. This analysis will cover the different arguments for and against the mass public experiencing a similar level of polarization as the elites. Affective polarization among the elite and the mass public will not be addressed in this section (2.1.1).

2.1.1 Polarization Among the Elites vs. Mass Public

The polarization divide between the elites and the mass public has been the subject of considerable scholarly attention. To begin with, elite polarization is polarization among politicians, and other decision-makers who hold influential positions in society (Gidron, Adams, and Horne 2020). Fiorina (2017) refers to this group of people as 'the political class' of America, which includes but is not limited to elected representatives and officials, benefactors, and party and issue activists. Scholars almost unanimously agree that political parties and politicians have become more polarized on a wide range of political issues in the past three to four decades (Mc-Carty, Poole, and Rosenthal 2006; Gidron, Adams, and Horne 2020; Webster and Abramowitz 2017). The mass public too, recognizes this polarization among the political elites of the Republican and the Democrat parties (Baldassarri and Gelman 2008). Finally, Fiorina (2017) shows a clear polarization trend in the US Congress and many other state legislators over the past 50 years. Hence, the veracity of heightened polarization among the political elite's issue positions is affirmed by many studies.

Yet there is one question which there is still no consensus on. Has the average American cit-

izen also polarized? Whereas some scholars adamantly support the idea that the American mass public followed a similar trend of polarization on issue positions over the past few centuries, others contend that the polarization for the average American has not changed.

Analyzing data from the American National Election Studies (ANES), Abramowitz and Saunders (2008) argue that polarization is not just an elite phenomenon and there has been a considerable increase in partisan polarization within the American electorate over the past several decades. Their evidence outlines that the difference between the mean score of Democrats and Republicans on a 7-point liberal-conservative identification scale have doubled between 1972 and 2004. In addition, evaluations of presidential performances have become increasingly divided along party lines since the 1970s (Abramowitz and Saunders 2008).

In response to Abramowitz and Saunders (2008)'s arguments, Fiorina, Abrams, and Pope (2008) propose that the data does not actually show a growing ideological divide between Democrats and Republicans, but rather a thought-provoking alternative: party sorting, which refers to the process by which individuals align their ideological views with one of the two major political parties.

Prior to the 1970s, it was common for the Republican party to have liberal representatives and for the Democrat party to have conservative representatives. In the words of M. Levendusky (2010), both parties were "ideologically heterogeneous". However, over the years the correlation between liberal-conservative identification and party identification has increased, and this trend has been driven primarily by the increasing homogeneity of the political parties themselves (Fiorina 2017). The increasing correlation between ideology and party identification does not mean that voters are becoming more extreme in their views. The phenomenon at play is simply a sorting process in which individuals with similar ideological views are increasingly clustering correspondingly with the two major political parties. Hence, a young LGPT person who grew up in a major city is more likely to be a Democrat than a Republican. Just like that, a middle-aged high-income person who is against abortion is more likely to be a Republican. Yet, Fiorina (2017) contends that there is still a sizeable amount of variation in party sorting on various salient political issues (e.g., abortion, defense spending).

In his book "The Partisan Sort", M. Levendusky (2010) situates his thesis in the middle

ground between Abramowitz and Saunders (2008) and Fiorina, Abrams, and Pope (2008). He agrees with Fiorina, Abrams, and Pope (2008) in that the American electorate has not polarized, and if it has, only very insignificantly. Yet, one of his main arguments is that political polarization in the US follows a top-down process and that elite polarization fuels mass polarization over the long term. In Levendusky's (2010) understanding, party sorting would be the first step toward mass polarization. When the political elites polarize, citizens have a clearer view of how party and ideology relate to one other. Citizens then sort themselves along party lines which creates fertile ground for mass polarization to burgeon. Even though there is further evidence to support this theory, the mechanism between party sorting and mass polarization is still unclear in the literature as partisan emotional volatility, and cross-cutting identities of partisans may be equally robust drivers of mass polarization (Mason 2016). Overall, there is no consensus on whether the average American citizen has become more polarized in their issue positions over time.

With the question of issue-position-based polarization among the American mass public remaining somewhat unresolved, there is another type of polarization that has gained significant attention in recent years: affective polarization. Affective polarization refers to the growing tendency of partisans to hold more positive feelings toward members of their own political party, and more negative feelings toward members of the opposing party. This type of polarization is based on emotions rather than issues or ideology (Iyengar et al. 2019).

2.1.2 Issue-based Polarization vs. Affective Polarization

In contrast to the literature on polarization in voters' issue positions, scholars overwhelmingly agree that affective polarization has significantly increased among the American mass public over the past few decades. Even political scientists who had previously argued that mass polarization does not exist on an issue-by-issue basis began acknowledging the penetrating existence of affective polarization in American society. Quoting Fiorina (2017, 58), "At that time there was only a modicum of evidence (for the existence of affective polarization) ... but research since then suggests that such" affective" partisan polarization has increased: Democrats and Republicans appear to dislike each other more than they did a generation ago." Interestingly

however, Iyengar et al. (2019) points out that there can be a disconnect between affective polarization and issue-based polarization. That is, voters can hold strong feelings of animosity towards members of the opposing party, but not necessarily be polarized on specific policy issues, and vice versa.

For example, Iyengar, Sood, and Lelkes (2012) tested whether there is a spillover effect of ideological polarization on affective polarization. The researchers analyzed the impact of policy preferences on partisan affect using the 1988 and 2004 ANES data sets and found no effect between the two measures. Furthermore, the authors note that the coefficients for strong partisan identification were considerably stronger in 2004, but the change in policy preferences stayed the same. The main finding of this study is that partisan identity is not rooted in ideology.

Graham and Svolik (2020) test whether Americans would vote against their own party if a candidate from their party adopts undemocratic positions. They find that in the control group, 63.1% of the respondents would still support their own party in the instance that a candidate from their party simply changes their political stance to another neutral and democratic stance. On the other hand, in the treatment group where the candidate adopts an undemocratic stance, the percentage of respondents that would still support their party dropped to 54.8%, which is a decrease of only 13.1%. These findings suggest that when parties change their ideology, most Americans still support their party, not punishing candidates with undemocratic principles. Hence, voters distinguish between the ideology of the party they support and their own partian identities.

This conclusion is supported by another body of research which deals of the political knowledge of American citizens. Choosing partisanship based on parties' ideological position would require a clear understanding of parties' policy stances, which most Americans struggle to accurately identify (Carpini and Keeter 1993; Ahler and Sood 2018). Instead, most Americans base the strength of their partisanship on a set of world views and biases. In the right environment, these biases can be exacerbated to increase affective polarization. Bartels (2002) argue that certain political scenarios which would otherwise lead to a converge in the political views of American citizens, paradoxically increases affective polarization between Republicans and Democrats as a result of partisan bias.

2.2 Affective Polarization

2.2.1 Conceptualization

There are two key drivers of affective polarization; 1. viewing co-partisans (in-group members) more positively, and 2. viewing opposing partisans (out-group members) negatively. Both biases are fuelled by strong and hard-to-break emotional affect. Not only co-partisans are liked more, empathized with more, and seen as more trustworthy, but also opposing partisans are judged harsher, and seen as more hostile and uncooperative (Gidron, Adams, and Horne 2020; Iyengar et al. 2019). Conceptually, affective polarization is an interplay between these two biases. Whether one drives the other, or whether one of the biases can exist alone appears to be context dependent. Although earlier studies argue that in-group love is a necessary precondition for out-group prejudice (Brewer 1999), more recent studies show that increasing out-group prejudice may also be a driving factor behind increasing in-group attachment (Matthew S. Levendusky 2018b). Essentially, the main idea is still clear: affective polarization is the main consequence of the emotional and psychological identification partisans develop, characterized by a strong attachment toward in-groups, and prejudice, fear, and animosity toward out-groups.

In the United States, affective polarization is the "tendency of people identifying as Republicans or Democrats to view opposing partisans negatively and copartisans positively" (Iyengar and Westwood 2015, 691). Research shows affective polarization has increased significantly over the past few decades and is at an all-time high in the United States (Boxell, Gentzkow, and Shapiro 2020). Furthermore, affective polarization is not limited to political preferences but also extends to racial, religious, and cultural differences (Mason 2018b).

The rise of affective polarization is concerning for several reasons. To begin with, affective polarization has the potential to pose significant challenges for the functioning of the political system and society as a whole. When citizens are affectively polarized, the tendency to believe that the opposing party, their policies and their supporters pose a threat to their life increases (McCoy and Somer 2019, 258). This leads to a decrease in rating opposing partisans with positive adjectives such as 'open-minded' and 'intelligent'. It also leads to an increase in rating opposing partisans with negative adjectives such as 'selfish' and 'mean' (M. Levendusky and Malhotra 2016). Naturally, this decreased trust and cooperation between individuals from op-

posing political parties may affect the social and political atmosphere of a nation negatively. It can lead to a breakdown in civil discourse, making it difficult for both the political elite and the mass public to engage in constructive discussions (Boxell, Gentzkow, and Shapiro 2020). The resulting political gridlock can hinder the functioning of the political system, potentially damaging democracy and undermining the checks and balances of a nation (Iyengar, Sood, and Lelkes 2012).

Social psychology literature also recognizes intergroup prejudice as one of the most important social problems, leading to discrimination, inequality and hostility between groups. Brewer (1999) writes that it is a natural human process to belong to social groups larger than ourselves. The various social groups we belong to make up a defining part of our identities. These social groups are also more competitive than individuals within the same settings (H. Tajfel 1982). Furthermore, when individuals categorize themselves into distinct social groups, it creates a basis for intergroup comparisons (H. Tajfel 1982). These social categorizations can be based on many factors like ethnicity, religion, partisanship, or nationality, and they usually accompany affective biases toward the outgroup.

Inevitably, partisans also separate the world into an "us" (own party, i.e., in-group) and "them" (opposing party, i.e., out-group) (Turner 1975). This "us versus them" mindset activates in-group favoritism and out-group discrimination, constantly shaping and transforming inter-group attitudes (Brewer 1999). Research shows that even when the shared characteristics among partisans are frivolous, partisans will associate positive feelings of belonging, feeling understood, and empathy consistently and mostly with their own group, and negative feelings of prejudice, fear, and intolerance with the out-group (Billig and Tajfel 1973). Understanding the mechanisms behind intergroup prejudice and bias is thus of eminent interest for scientific as well as political reasons.

The fact that partisanship in the U.S. is one of the most salient social identifiers makes the effects of increasing affective polarization felt even more intense within a society (Gidron, Adams, and Horne 2020). Firstly, partisanship rarely changes over the course of someone's lifetime. Our partisan identities often are so stable and enduring that political parties often shape their foundations catering to these identities. (Iyengar et al. 2019). Mason (2018a) compares partisans to sport fans. Some are hardcore fans who cheer for their team regularly and some are closer to being neutral. But given the right situations, such as in a derby game against a rival opponent or a final game of a tournament, their passion and loyalty for their team come to the forefront.

When this analogy is carried on to partisans, it is inevitable to observe that the political landscape in the United States features fertile ground for this partisan affect to burgeon. In the United States, when elections and political campaigns take place, they become the main news event for many months or even years ongoing (Lee 2016). The fact that these national political events occur frequently in the US also means that partisans receive a never-ending cycle of political 'sports games'. Furthermore, (Lee 2016) writes that today's governments put great emphasis on having their strategic plan align with the next campaign, which means voters constantly receive "partisan cues from elites" (Iyengar et al. 2019, 130). This further contributes to making partisan identities a most salient identity in the lives of ordinary Americans.

It appears that the way partisans feel about their partisan attachment, or in other words, partisan emotions, is an indispensable determinant of inter-group attitudes (i.e., affective polarization) and hence the dynamics of a democratic political system. Given the challenges that affective polarization poses for the functioning of the political system and society, many researchers have attempted to better understand affective polarization. Through a more comprehensive overview of the mechanisms behind affective polarization, researchers and policymakers can develop interventions and policies that promote constructive dialogue and reduce the harmful effects of affective polarization. In the next chapter, the causes and drivers of affective polarization will be explored, providing insights into the factors that contribute to the persistence and escalation of both ingroup attachment and outgroup prejudice.

2.2.2 Measurement

When it comes to operationalizing affective polarization studies have used several methods. In comparison to measuring issue-based polarization, which is typically measured by asking participants to position themselves on a scale that ranges from opposing to supporting a given policy issue, affective polarization is traditionally measured by asking participants to rate inparty and out-party members on a "feeling thermometer" scale. Affective polarization is then calculated as the difference between the score respondents give their in-party members and the score they assign to out-party members (Boxell, Gentzkow, and Shapiro 2020).

Both affective polarization and issue-based polarization are often measured in national surveys. If the question measures issue-based polarization, a variety of policy-specific questions are asked to capture respondents' views on different topics (Abramowitz and Saunders 2008). The responses are then aggregated to examine the distribution of positions across the ideological spectrum, whereby the extent of polarization (or the lack of) both on specific issues and on an aggregate level are observed. On the other hand, affective polarization can be measured through several unique questions.

For example, Matthew S. Levendusky and Malhotra (2016) asked subjects how well different character traits describe the opposing party. Among the traits asked in the study were 'intelligent', 'open-minded', 'selfish', 'mean', and 'American'. Researchers have also tested other less overt questions to gauge partisans' affective polarization. For example, one popular question from the literature is asking individuals how happy they would be if their son or daughter married an out-party member (Almond and Verba 1984). Another one asks partisans to imagine a hypothetical scenario in which they are a member of a scholarship committee faced with the option of awarding a scholarship to either an in-party or an out-party whereby the outparty applicant has a slightly higher GPA

2.2.3 Causes of Affective Polarization

Section 2.1.1 discussed about how some researchers proposed that what we see as polarization in national survey data is not polarization per se, but rather a phenomenon called party sorting (the alignment of group identities according to party lines). Although party sorting is only insignificantly linked to polarization based on issue positions, there is compelling evidence that shows that it may still trigger affective polarization (M. Levendusky 2010). The mechanism works as follows: when the majority of Democrats identify as liberals and the majority of Republicans identify as conservatives, it becomes less likely for citizens to interact with co-partisans who hold opposing political views and identities (Iyengar et al. 2019). This lack of exposure also

means that citizens have fewer opportunities to engage with opposing partisans who share similar political views and identities. As a result, people tend to feel more socially distant from members of the opposing party.

Party sorting does not happen by chance. Gidron, Adams, and Horne (2020) analyze polarization trends over time and find that when party elites become polarized on cultural issues, it becomes easier for partisans to sort themselves along party lines, which paves the way for affective polarization to flourish. Though it is important to note here that partisans do not sort themselves along party lines when elites polarize on economic issues, but rather only on cultural issues such as race, immigration, and cultural identity (Gidron, Adams, and Horne 2020).

M. Levendusky (2010) also finds that party sorting changes how voters feel about parties. By anchoring voters more firmly to their party, sorting fosters biases that highlight the positive aspects of one's own party while emphasizing the negative aspects of the opposing party. This effect leads to polarized affective evaluations of the parties, with voters being more likely to like their own party more and the opposing party less. M. Levendusky (2010) tested this hypothesis by examining the NES "feeling thermometer" scales, which measure respondents' affective judgments of the parties and candidates using a temperature-like cool to warm scale. The results show that sorting significantly increases affective polarization, with voters' affective evaluations of the parties being a significant 19 points more (out of 101 points) polarized after sorting. The same also extends to candidate evaluations, with sorting leading to a significant increase in the gap between the feeling thermometer ratings of presidential and vice-presidential nominees. Overall, these findings suggest that when voters are well sorted into 'teams' according to party lines, they begin viewing their own party more positively and the opposing party more negatively.

The effects of party sorting on increasing affective polarization are further supported by another body of research that study the effects of non-aligned group identities in non-partisan contexts. When group identities are non-aligned and cross-cutting, individuals tend to exhibit greater levels of tolerance and reduced bias towards outgroups [@ roccas_social_2002]. Mason (2015) writes that environments with non-aligned identities prevent the cognitive elements of ingroup bias and negative emotions to catalyze by reducing the perceived differences between

groups. Moreover, multiple social identities provide individuals with a sense of belonging to a broader range of groups, thereby promoting greater openness to and acceptance of outgroups.

The literature shows that the increasing sorting of American partisans along party lines in the past thirty years has made Democrat and Republican partisans more socially distant and hostile toward each other, despite the overall distance in voter positions remaining the same (Mason 2015). The mechanism behind how this works is not exactly clear, but M. Levendusky (2010) suggests that it is simply because partisans are better able to distinguish between ingroup and out-group members. This new kind of polarization based on affect tends to be less prominent in environments with multiple nonaligned social identities because it is harder to people to naturally sort themselves into groups in such contexts.

Another line of research writes about how national economic conditions are associated with affective polarization. For example, in times of economic decline or increasing wealth inequality, partisans may benefit from adopting a risk-averse strategy that favors their in-group (Stewart, McCarty, and Bryson 2018). In these scenarios, partisans purposefully interact and communicate less with the out-group and engage more with their in-group. The resulting increased in-group attachment can persist and persevere even after inequality conditions are reversed. Notably, the western democracies with the highest levels of income inequality, such as the United States and Britain, have higher levels of affective polarization. On the other hand, countries with less economic inequality, like the Netherlands and Finland, show milder levels of affective polarization (Gidron, Adams, and Horne 2020). When controlling for other factors like elite policy disputes and electoral institutions as well, Gidron, Adams, and Horne (2020) find that affective polarization is positively associated with economic inequality.

The effects of media in increasing affective affective polarization are also noted in the literature. M. Levendusky and Malhotra (2016) show that partisan media can increase affective polarization simply by covering news on polarization. The researchers tested the impact of exposure to polarized articles versus moderate articles on both affective and issue-based polarization. They found that reading a polarized article had a significant effect on perceived polarization, with individuals perceiving greater polarization between Democrats and Republicans compared to those who read a moderate article. Furthermore, the study revealed that exposure to polarized politics in the media led respondents to moderate their issue positions, moving towards more centrist stances. However, despite this moderation, participants displayed heightened negative affect towards the opposing party. The reason the authors give for this is that the polarized articles painted a picture of "incivility and a lack of compromise" (M. Levendusky and Malhotra 2016, 287) coming from the out-party partisans, which made the respondents want to moderate their issue positions so as to not be polarized like the out-party partisans, yet at the same time increased their negative feelings toward the out-party. Other studies also point to the effects of media in increasing affective polarization (Tucker et al. 2018; Druckman, Levendusky, and McLain 2018).

With that being said, there is research to suggest the opposite as well. Prior (2013) argues that the mere increase in partisan media outlets does not increase polarization. The increase in partisan media outlets solely served the purpose of satisfying the news demand of partisans who already strongly identified with their parties before it became economically and technologically feasible to cater to smaller and more specialized audiences. Consequently, it comes as no surprise that certain fervent partisans gravitated towards media formats that align with their ideological preferences as they became available. Hence, it is crucial to distinguish between the two sides of this literature; the first of which contends that the media has caught up with partisan fringes and the second asserts that the media actively propels Americans towards extreme partisan positions. Prior (2013) writes that existing research does not provide compelling causal link between partisan media and heightened partisanship among Americans. Moreover, he claims that the the majority of voters tend to occupy centrist stances, with many either entirely avoiding partisan media or engaging with content from a mix of ideological sources.

Druckman, Levendusky, and McLain (2018) explain the spread of affective polarization using a fundamental phenomenon of political communication research. In their experimental study, the researchers find that those who consume partisan media (opinion leaders) can spread its effects to non-watchers through interpersonal discussion, creating a two-step communication flow model that amplifies the influence of these outlets. The researchers find that the effects of two-step communication flow in altering partisan opinions were highly significant for both homogenous (e.g. Republican opinion leaders discussing with Republican non-watchers) and heterogenous (e.g. Republican opinion leaders discussing with Democrat non-watchers or a mixed group) groups.

An interesting discussion point to reflect upon from Druckman, Levendusky, and McLain (2018) is the mechanism through which interpersonal conversations spread affective polarization. When partisans whose opinions are already solidified from watching partisan media talk to in-group non-watchers, it is easier for in-group non-watchers to take perspective with their own partisan perspectives even if the shared partisan news is more extreme than their own views. In this sense, it can be concluded that perspective-taking strengthens in-group attachment and out-group hostility as partisan media can perpetuate both, hence increasing affective polarization.

Overall, it is evident that multiple factors contribute to affective polarization, including party sorting, the saliency of politics in the U.S., economic conditions, media exposure, and more. Party sorting leads to social distance and reduced interactions between co-partisans and opposing partisans, increasing negative feelings towards the opposing party. Economic conditions also contribute to affective polarization. Time of economic decline and increasing social and wealth inequality prompt risk-averse strategies that favor in-group interactions and reinforce in-group attachment. The saliency of politics in the U.S. and parties' election and campaigning strategies also play a role in keeping partisan identities active. While the effects of media on affective polarization are still not clear, there is compelling evidence that shows that the media may at least play an intermediary role by increasing the spread affective polarization through interpersonal discussions facilitated by partisan media consumption. Further research is needed to understand how the transforming political landscape of America is shaping partisan affect, as understanding the causes of affective polarization is the first step toward undoing and decreasing affective polarization. The following section will cover various methods researchers tested in decreasing affective polarization before moving on to how perspective-taking can decrease or increase affective polarization.

2.3 Decreasing Affective Polarization

2.3.1 Methods in the Literature

Ahler and Sood (2018) find that people tend to greatly overestimate the proportion of party supporters that belong to party-stereotypical groups. For example, while only 6% of Democrats are LGBT, people believe that it is as high as 32%. Similarly, only 2% of Republicans earn over \$250,000 per year, yet people believe that it is as high as 38% (Ahler and Sood 2018). Respondents in this study overestimated the share of party-stereotypical groups for both their own parties and the opposing party by an average of 342% across 8 identities. The researchers also find that those with the highest levels of political interest (i.e. those in America's 'political class' (Fiorina 2017)) hold the most distorted perceptions of party composition which confirms the findings of previous studies which show that elite polarization is greater than mass polarization.

Ahler and Sood (2018) then test whether these misconceptions can fuel affective polarization, and whether enlightening respondents on the reality of their estimates make them feel less socially distant to partisans of the opposing party, hence decreasing affective polarization. Across three experiments, they find that misconceptions about the size and population of partystereotypical groups not only increase partisan affect, but also correcting partisans' misconceptions changes partisan sentiment toward out-groups significantly in the positive direction.

Another approach to reducing partisan animus is to shift the salience of partisan identities toward a common group identity. By emphasizing that Democrats and Republicans are both Americans, rather than just members of a disliked partisan out-group, individuals are more likely to view each other as in-group members, leading to a decrease in group-based partisan hostility. Matthew S. Levendusky (2018b) put this theory to the test in a survey experiment and a natural experiment on U.S. Independence Day. He found that priming American identity reduces animus towards the other party. Subjects whose American identity was primed were 25% less likely to rate the other party at 0 degrees on a feeling thermometer scale, and 35% more likely to rate the other party at 50 degrees or higher. The findings of this study confirm earlier pioneering studies in social psychology which show that simply shifting people's attention to different identities can completely change the way they view the world around them, so much so that the out-group

becomes an in-group (Henri Tajfel and Wilkes 1963). Yet, it is important to mention that these are only short-term effects, and it is not clear whether priming American identity can reduce affective polarization in the long-term.

In another study, Matthew S. Levendusky (2018a) primed partisan ambivalence and selfaffirmations to test whether it reduce affective polarization. Partisan ambivalence was primed by having partisans focus on what they dislike about their own party and what they like about the out-party. Self-affirmation techniques were manipulated by having partisans focus on positive qualities about themselves other than the party which they support and like. The study found that neither of these methods reduced affective polarization which is an important finding because both of the above-mentioned methods have proven successful in reducing intergroup prejudice in other contexts (Iyengar et al. 2019). This suggests that reducing affective polarization is not an easy feat to accomplish. The only priming method to work was priming American nationality (Matthew S. Levendusky 2018b), and there are not many strong primes that compare to it (Iyengar et al. 2019).

Iyengar et al. (2019) notes that another way to decrease affective polarization may be exposing people to discussions and constructive interactions with opposing partisans, which is generally referred to as the intergroup contact hypothesis (Matthew S. Levendusky and Stecula 2023). Exposure to different political points of view should increase the tolerance people have for opposing viewpoints, which should translate into reducing affective polarization levels (Mutz 2002). Yet, there is already a method in the literature which exposes individuals to outgroup members as a way to reduce intergroup prejudice.

2.3.2 Can Perspective-Taking Be a Remedy?

Perspective taking has been used by researchers to mediate intergroup attitudes for over three decades with greatly varying findings. The goal of perspective-taking interventions is having individuals see the perspective of outgroup members and reduce negative feelings toward outgroup members (Galinsky and Moskowitz 2000; Vorauer, Martens, and Sasaki 2009). Yet, the relationship between perspective-taking and affective polarization is greatly understudied as there are very few studies of perspective-taking in partisan contexts. Only very recently, three major studies have directly tested the effects of perspective-taking on affective polarization.

In the following section, I discuss what perspective-taking is, the mechanisms through which it reduces intergroup bias, or improves intergroup relations and whether it can be applied to partisan settings to reduce affective polarization.

2.4 Perspective-Taking

2.4.1 What is Pespective-Taking?

Different scholars have defined perspective-taking differently. Galinsky & Moskowitz (- Galinsky and Moskowitz 2000, 708) define perspective-taking simply as "the ability to entertain the perspective of another". Yet, this definition misses to capture the fundamental goals of perspective-taking which are to reduce prejudice and improve intergroup relations by triggering cognitive abilities and empathy (Saveski et al. 2022; Todd and Galinsky 2014). Solely seeing things from the other's perspective has been shown to not reduce prejudice levels (Saveski et al. 2022). Dovidio et al. (2004, 1537) outline that perspective-taking interventions should aim to change "people's perspectives so that they are coordinated with the experiences of members of other groups". This means that another goal of perspective-taking is to improve not only attitudes towards specific members of the out-group but toward the whole out-group. Hence, perspective-taking involves more than simply taking the perspective of another; it aims to trigger cognitive empathy and reduce prejudice levels, while at the same time improving attitudes towards the whole out-group.

The mechanism through which people take others' perspectives and thus tweak or change their attitudes is also relevant, and the literature offers several conflicting theories about it. Perspective-taking functions through affective mechanisms and cognitive mechanisms (Todd and Galinsky 2014; Dovidio et al. 2004; Simonovits, Kézdi, and Kardos 2018). Yet, it is difficult to assess which mechanism operates when and in which contexts. Shortly put, affective mechanisms of perspective-taking work by triggering an emotional empathy-based response toward the out-group. Cognitive mechanisms of perspective-taking emphasize understanding and the ability to intellectually grasp and interpret another person's perspective. The following sections delve deeper into these two concepts and how perspective-taking interventions work with them.

2.4.2 Affective Mechanisms of Perspective-Taking

Traditionally, perspective-taking is theorized to be driven mainly by affective mechanisms. By being exposed to the experiences of the out-group, perspective-taking generates emotions of empathy. (Galinsky and Moskowitz 2000; Batson, Early, and Salvarani 1997). Empathy includes but is not limited to feelings of compassion, trust, and support toward the out-group. Researchers have put forward that these same emotions also drive partisan attachment and identification with in-group members (Billig and Tajfel 1973; Simas, Clifford, and Kirkland 2020). Could then the same emotion of empathy be used to discriminate less against the out-groups and view them more positively? Typically, in social psychology studies, this is tested by exposing participants to a scenario in which they are asked to imagine the world from the perspective of an out-group member (Galinsky and Moskowitz 2000). For example, participants may be asked to imagine what it is like to be a member of a racial or ethnic group different from their own. It is theorized that simple asking individuals to imagine the out-group member is enough to trigger affective mechanisms of perspective-taking which can reduce out-group bias (Todd and Galinsky 2014).

Notably, some studies show that through emphasizing (affective mechanisms) with the outgroup, perspective-taking decreases prejudice (Batson, Early, and Salvarani 1997; Simonovits, Kézdi, and Kardos 2018; Saveski et al. 2022) and increases positive inclusionary behavior toward out-group members (Adida, Lo, and Platas 2018). Batson, Early, and Salvarani (1997) showed that using empathy in perspective-taking interventions can significantly reduce intergroup bias. Simonovits, Kézdi, and Kardos (2018) also found that experiencing the same emotions as the outgroup significantly reduces outgroup prejudice.

However, the promise of empathy as a key mechanism for reducing intergroup conflict does not always hold true. Simas, Clifford, and Kirkland (2020) use nationally representative surveys and an experimental design to test how empathic concern is associated with interparty hostilities. The authors argue that empathy is not a mechanism through which intergroup hostility is reduced. On the contrary, their findings show that individuals with the highest amounts of dispositional empathy (the amount of empathy one naturally has) are also the most affectively polarized. In fact, participants higher in dispositional empathic concern were also the ones to exhibit more in-party favoritism and greater partisan bias in expressions of tolerance and schadenfreude. This is because individuals tend to empathize more with those who are similar to them, such as their own political party, and this can lead to a devaluation of outgroup members and an increase in conflict. Hence, although empathy is a core mechanism of perspective-taking, it may do little to reduce intergroup prejudice, and thus affective polarization.

The research by Simas, Clifford, and Kirkland (2020) is not the only study which shows that perspective-taking may either yield null effects or increase prejudice instead of decreasing it. Bor and Simonovits (2021) hypothesize that in the context of a financially poor outgroup, perspective-taking through empathy can strong trigger feelings of compassion, and that sparks a desire to help the outgroup. Yet their findings show that empathy with the poor does not have a significant effect on social welfare attitudes. Schumacher, Rooduijn, and Gillissen (2023) also finds that perspective-taking can backfire in people with high dispositional empathy strengthening ingroup bias and increasing affective polarization. Furthermore, there is also evidence to suggest that if taking the perspective of an individual or a group threatens the self-esteem or puts the self-view under a negative light, perspective-taking interventions may produce opposite effects increasing the hostility toward out-group members (Sassenrath, Hodges, and Pfattheicher 2016). In particular, taking the viewpoint of someone with a different worldview may jeopardize the core values or identities of the perspective taker (Solomon, Greenberg, and Pyszczynski 1991). Especially when individuals experience threats concerning the outgroup, negative evaluations toward the out-group increase.

Stephan et al. (2002) found that black Americans and white Americans who have the most negative evaluations of the out-group also find the out-group the most threatening to their ingroup's safety and stability. Additionally, negative stereotypes of outgroups can create a feeling of threat among ingroup members, leading to anxiety and avoiding interactions (Sassenrath, Hodges, and Pfattheicher 2016). As a result of increasing polarization in the United States, the tendency to fear and be threatened by opposing party members has also increased dramatically (Stewart, McCarty, and Bryson 2018). Earlier threat-inducing experiences with the outparty partisans may be a critical confounding variable in perspective-taking interventions which employ both affective and cognitive mechanisms. Thus, perspective-taking interventions which avoid triggering feelings of being threatened by being exposed to the outgroup can be more internally valid.

Against the backdrop of these findings, it is natural to question whether the findings of these studies imply that perspective-taking interventions should not be undertaken as one can risk increasing affective polarization among those with high dispositional empathy. However, Simas, Clifford, and Kirkland (2020) also find that in their study, participants with the highest dispotional empathy levels were also more likely to engage in contact with outparty members and tolerate disagreement. This suggests that what makes individuals take the perspective of other and on top of that consider changing their attitudes does not involve an emotional reaction to another person's situation. When perspective-taking interventions do not aim to get the participants to feel a certain emotion, they may result in better intergroup understanding without the negative emotional responses. High perspective takers are also less likely to stereotype and tolerate disagreement (Mutz 2006), and more likely to engage in formal debates and discussions more likely to be attracted to opportunities for political debate and dialogue (Simas, Clifford, and Kirkland 2020). Overall, there is compelling evidence within the literature that suggest that perspective-taking with the out-group does not take place through inducing empathy with the out-group. Individuals tend to reserve their empathy for the in-group, and hence they are not able to have much empathy for the out-group.

2.4.3 Cognitive Mechanisms of Perspective-Taking

The literature so far has touched upon the affective (emotion-inducing) mechanisms of perspective-taking. The fact that affective mechanisms of perspective-taking may not be predictor of intergroup relations prompts us to ask what is different about perspective-taking studies that succeeded in reducing intergroup prejudice.

Simas, Clifford, and Kirkland (2020) write that when perspective-taking interventions are successful, it is not because people empathize with the out-group, but because of underlying cognitive mechanisms which the perspective-taking intervention triggers. Cognitive mechanisms of perspective-taking can take place in several forms (Dovidio et al. 2004; Todd and

Galinsky 2014). For example, comparing the outgroup to one's own positive self-evaluations can correct negative misconceptions about the outgroup, (i.e., self-outgroup merging) and thus reduce bias toward the outgroup. Todd and Burgmer (2013) tested this on a sample of non-Turkish identifying German citizens using an Implicit Association Test (IAT). Participants were instructed to categorize four self-related words (me, my, mine, myself) and eight common Turkish names (e.g., Hatice, Mehmet) using one response key. At the same time, they categorized four non-self-related words (they, them, their, themselves) and eight common German names (e.g., Lukas, Katharina) on another key. In another critical block, the response mappings were reversed, with one key designated for self-related words and German names, and another key for non-self-related words and Turkish names. In the second task, participants underwent the same IAT using positive and negative words (i.e., good, bad) along with the same German and Turkish names. The results showed that strengthening associations between the self and the targeted outgroup increases positive intergroup evaluations. Galinsky and Moskowitz (2000, 709) argue that this process of assigning self-descriptive traits to the outgroup increases the overlap between self-characteristics and the out-group. Yet, it is important to mention that self-outgroup merging cannot be consistently applied as a reliable perspective-taking intervention because not everyone's self-associations are positive.

Another way in which perspective-taking employs cognitive mechanisms is by shifting attributional thinking (Todd and Galinsky 2014). This happens when the perspective-taking intervention is structured in a way that makes the treated group attribute the behavior of out-group members to external factors, such discrimination, rather than internal factors, like their personality (Vescio, Sechrist, and Paolucci 2003). When the intervention emphasizes that external factors play a significant role in shaping the out-group target's life, such as unfair treatment or even unluckiness, encourages the treated group to attribute the behavior of out-group members to these external factors rather than internal factors like their personality. This shift in attributional thinking changes the opinions of the treated about the outgroup positively, especially for individuals who are the most polarized. This approach can be especially effective in reducing stereotyping. Therefore, cognitive mechanisms of perspective-taking such as considering external factors is important for increasing positive inclusionary behaviour toward out-group

members.

In their study, Vescio, Sechrist, and Paolucci (2003) presented participants with a footage of an African American interviewee who spoke about the challenges he experienced in belonging to a negatively stereotyped group. The researchers were particularly interested in whether it was empathy or situational attributions (external factors) which explained more of the increased positive attitudes toward persons of other racial groups in the treatment group receiving the perspective-taking intervention. They found that both empathy and situational attributions played a role, but situational attributions accounted for more of the variance in the relationship between perspective taking and intergroup attitudes than empathy did. In other words, when people took the perspective of the out-group target and attributed their difficulties to situational factors, such as unfair treatment or discrimination, they were more likely to have reduced prejudice and more positive attitudes towards the out-group. This suggests that the way the out-group experience is presented in perspective-taking interventions may be a key factor in determining the change in participants' attitudes toward the out-group after the perspective-taking intervention.

Simonovits, Kézdi, and Kardos (2018) designed a randomized experiment where participants had to play either an online perspective-taking game or an unrelated control game. In the perspective-taking game the participants went through different life challenges playing the main character; an ethnic Roma minority in Hungary. These challenges were typical for ethnic Romas in Hungary, and not very typical for non-Romas, which kept the participants engaged and interested throughout the various stages of the game. More importantly, The game provided the participants a more engaging way to grasp the kinds of hardships and racism Roma's in Hungary face which showed to the participants the influence of external factors in Roma's lives. By implicitly showing the significance of external factors in shaping the lives of outgroup members, Simonovits, Kézdi, and Kardos (2018) triggered the cognitive mechanisms of perspective-taking. The findings showed that the treatment group scored significantly lower in prejudice levels before and after the treatment compared to the control group. These reduced prejudice effects lasted for at least one month and had spillover effects over other domains: not only prejudice towards Romas in Hungary was reduced, but also intention to vote for Hungary's far-right, overtly racist party decreased by 10%.

There is substantial evidence to show that engaging cognitive mechanisms of perspectivetaking increases individuals ability to take perspective with the outgroup decreasing intergroup prejudice and hostility. Yet, in some studies, the researchers note that it is not exactly clear whether the effects of perspective-taking is produced through the cognitive or the affective mechanisms of perspective-taking, or possibly both (Simonovits, Kézdi, and Kardos 2018), as isolating these mechanisms are difficult to achieve.

Overall, the literature offers conflicting findings as to whether perspective-taking interventions can be a reliable method in reducing intergroup prejudice and bias. Whereas perspectivetaking has improved intergroup relations in some contexts, in other contexts, it has increased intergroup prejudice or yielded null effects. More importantly, it is not clear whether these findings can be transferred to perspective-taking having significant effects on reducing affective polarization. This is because most perspective-taking research is conducted in non-partisan contexts. In fact, very few perspective-taking research is conducted in relation to its effects on party partisans, and only in the last few years.

2.4.4 Decreasing Affective Polarization Through Perspective-Taking

One of the major studies which studied the effects of perspective-taking directly on affective polarization is by Saveski et al. (2022). The study, designed as a field experiment on Twitter, found that being exposed to the Twitter feeds of opposing partisans increased user engagement but did not improve participants' understanding and empathy for why others might hold opposing views. But when exposure to politically opposed media was framed in terms of a familiar experience, such as having differing opinions with a friend, affective polarization levels reduced significantly. This way the perspective-taking intervention employed the affective mechanisms of perspective-taking. When the treatment groups read that their exposure to opposing partisan media should be treated as if they are disagreeing with a friend, it made them think of their engagement with the opposing partisan feed in a more empathetic way (Saveski et al. 2022). The findings of this study make a significant contribution to the literature as they highlight that the framing of the perspective-taking intervention is a crucial factor in its effect on improving

intergroup relations. However, as much as the study contributes to the literature, the experiment being carried out in a field setting, lacks the control one has over survey experimental conditions in online survey experiments which this thesis employs. The participants in the study were Twitter users and it is unclear how much or how long each participant engaged with the treatment.

Matthew S. Levendusky and Stecula (2023) tested whether Democrats and Republicans who engage in heterogenous discussions experience a reduction in their affective polarization levels. The participants in this study were exposed to perspective-taking interventions, but the study itself was carried out in a real-life discussion setting which is not how most perspective-taking research has taken place. Most perspective-taking research has taken place in artificial settings under more controlled environments, and usually through survey experiments. Hence it is difficult to claim whether the theories and findings of perspective-taking interventions in real-life settings can be applied to artificial settings where there is not real-life intergroup contact.

In another study, Schumacher, Rooduijn, and Gillissen (2023) tested the effects of perspective-taking and empathetic concern on affective polarization, yet on a sample of Dutch voters. Contrary to Saveski et al. (2022)'s findings, the researchers find that triggering affective mechanisms of perspective-taking fuels affective polarization instead of decreasing it.

3 Hypothesis

Considering the literature on perspective-taking, it is difficult to conclude whether perspectivetaking is manifested through affective mechanisms or cognitive mechanisms. There is evidence to support the claim that affective mechanisms of perspective-taking do not have an effect on intergroup prejudice levels (Bor and Simonovits 2021), or in some cases have a positive effect (Simas, Clifford, and Kirkland 2020; Schumacher, Rooduijn, and Gillissen 2023), increasing prejudice levels. Yet, many studies still support the argument that through the emotion of empathy affective mechanisms of perspective-taking can significantly reduce intergroup prejudice and hostility (Batson, Early, and Salvarani 1997; Galinsky and Moskowitz 2000; Saveski et al. 2022). On the other hand, perspective-taking interventions which employ cognitive mechanisms appear to be stronger predictors of intergroup prejudice levels (Dovidio et al. 2004; Simas, Clifford, and Kirkland 2020).

Against the backdrop of these findings, this paper aims to isolate the effects of cognitive mechanisms of perspective-taking and test its effect on affective polarization. To achieve this, the paper posits the following two hypotheses:

Hypothesis I: The simultaneous exposure to both cognitive and affective mechanisms of perspective-taking will have a negative effect on affective polarization levels.

Hypothesis II: The sole exposure to affective mechanisms of perspective-taking, without cognitive mechanisms, will have a negative effect on affective polarization levels.

4 Methods

4.1 Research Design

To study the effects of perspective-taking on affective polarization, a survey experiment was fielded for people who live in the United States. The survey experiment was designed as a randomized control trial (RCT). Randomization offers strong grounds for drawing causal inferences (Kalaian 2008). Although RCTs have their own limitations in predicting effectiveness, such as external validity (Cartwright and Munro 2010), randomization provides the most straightforward approach to test the effects of different mechanisms of perspective-taking on affective polarization.

The questionnaire for the survey was created with the online survey tool *Qualtrics* and distributed on Facebook as an advertisement. The Facebook advertisement emphasized that the survey was conducted by a graduate student and captured users' attention by offering them a chance to enter a lottery with a \$100 prize upon survey completion. The data collection process took place between the 20th of May 2023, and the 29th of May 2023. The data was cleaned and analyzed with *R-Studio*, using multiple linear regression models.

The target audience was set as Facebook users living the United States older than 18 years of age. This cutoff was done to exclude citizens who cannot vote. American partisans were chosen as the target audience because affective polarization is more prominent and widespread in the United States than in other democracies (Boxell, Gentzkow, and Shapiro 2020). Furthermore, the literature on perspective-taking is substantially more developed within the American context than in other countries which allows the different theories within the field to be tested in a more internally valid manner. Moreover, the political atmosphere of the U.S. is subject to constant changes especially after COVID-19, which necessitates ongoing research updates in the field of affective polarization (Gidron, Adams, and Horne 2020).

The survey was structured as follows. Firstly, the participants read an introduction about the survey which noted that the survey is about political attitudes. After agreeing with the informed consent, the participants began the survey. The first questions of the survey were basic demographic questions. All of these demographic questions were chosen from the openaccess database of questions from the ANES. Furthermore, the chosen demographic questions were from the most recent editions of the ANES, and thus the most updated ones. The final demographic question was about which party the participants identify with. The participants who chose 'Democrat' or 'Republican' continued on with the survey. Those who chose 'Independent' and 'Something Else' were directed to the end of survey page. As much as keeping participants who identify as Independents may have yielded more data by further asking them whether they feel closer to the Republican or the Democrat party, this was avoided for two reasons. Firstly, the author wanted to test the effects of perspective-taking on affective polarization solely on partisans who identify as Democrats or Republicans. Namely, Matthew S. Levendusky (2018b) found that partisans who identify as Independents to be as high as they were in the sample.

After the demographic questions, the participants, now limited to only Democrats and Republicans, were asked a series of questions to measure their baseline affective polarization levels. This was followed by being randomly assigned to one of the three experimental conditions: two treatment groups (T1 & T2) and one control group. Finally, the participants were asked the same questions to measure their affective polarization levels after being exposed to the experimental conditions. All three experimental conditions featured additional questions about political attitudes so that the control group would not receive the same affective polarization questions immediately after answering them the first time. This kept natural flow of the survey for all participants in the three experimental conditions.

The effect of perspective-taking on affective polarization was operationalized as follows.

4.2 Independent Variables

The independent variable of this study is perspective-taking. The standard approach to induce perspective-taking involves a series of steps (Todd and Galinsky 2014). Participants are usually first introduced to an individual group member either directly (Vorauer, Martens, and Sasaki 2009), or indirectly through a vignette (Finlay and Stephan 2000), an interactive game (Simonovits, Kézdi, and Kardos 2018), or door-to-door canvassing (Broockman and Kalla 2016).

Some studies have also used video and audio recordings as part of perspective taking interventions (Todd and Galinsky 2014). Galinsky and Moskowitz (2000) asked participants to write about a day in the life of a photographed out-group person. Adida, Lo, and Platas (2018) asked participants to write a letter to the President of the United States in favor of admitting refugees (i.e. the out-group in the study).

The treatment of this study was a written story about an out-party member. The first treatment group (TI) read a short story about an out-party member named Casey who votes for the out-party. If the respondent was a Democrat, Casey was a Republican and if the respondent was a Republican, Casey was a Democrat. Casey's story read:

"Casey is not a political person but votes Republican/Democrat. Her decision to vote Republican/Democrat reflects her deeply-held values and beliefs. Casey holds no negative feelings toward Democrats/Republicans and keeps an open mind for others' perspectives."

Casey's story was formulated in a way to trigger only the affective mechanisms of perspective-taking by emphasizing that Casey partisan affiliation is not a result of (Republican or Democrat) external circumstances she cannot control but rather because her political values and beliefs truly align with the party she votes for. The final sentence in the story additionally emphasizes that Casey holds no negative feelings toward the out-party. This was done to avoid triggering the negative aspects of affective mechanisms of perspective-taking (Simas, Clifford, and Kirkland 2020; Stewart, McCarty, and Bryson 2018), such as the respondent feeling threatened by the out-party member Casey. For the same reason, it was also emphasized that Casey is not a political person. This way participants could only focus on imagining themselves in Casey's situation without having to also imagine possessing the characteristics they may associate negative with out-party members. Hence, *T1* tests Hypothesis II. In this study, the participants' reactions to the story were recorded through asking them to imagine that they are the person in the story, and whether they would vote for the opposing party if they were the person in the story, which is a typical procedure in perspective-taking studies (Todd and Galinsky 2014). For example, for the story above the question was:

For a brief moment now, imagine that you are Casey. Given the circumstances described, how likely is it that you would vote Democrat?
In the literature as well, participants' reactions to the out-group are recorded either through observation (Saveski et al. 2022), or through measures such as survey questions (Bor and Simonovits 2021). In this survey, the answers ranged on a 5-point Likert scale from "Extremely Unlikely" to "Extremely Likely".

The second treatment group (T2) also received Casey's story the same way it was presented to T1. However, in addition to Casey's story, T2 received an additional story about another outparty member named Alex. In both stories, Alex and Casey were chosen to be referred to with she/her pronouns for the sake of consistency. Alex's story was formulated in a way to induce both affective and cognitive mechanisms of perspective-taking. Alex's story read:

"Alex is not a political person but votes Republican/Democrat. In the past, she was discriminated against harshly by some close friends who strongly identified as Democrats/Republicans. For example, she regularly endured careless derogatory remarks about herself, solely because of her Republican/Democrat affiliation. Despite her efforts to maintain these friendships, she was never fully accepted or understood. Alex holds no negative feelings toward Democrats/Republicans, but the unfair treatment she experienced left her feeling disheartened and affected her voting choices profoundly."

The question which followed Alexs's story was:

For a brief moment now, imagine that you are Alex. Given the circumstances described, how likely is it that you would vote Democrat/Republican?

Alex's story was formulated in a way which would induce both the cognitive mechanisms and the affective mechanisms of perspective-taking. Affective mechanisms were induced through the question which followed Alex's story. The general aim of Alex's story was to convince participants that external factors played a significant role in Alex's partisan affiliation. Alex was not only subject to harsh discrimination based on her partisan affiliation, but by writing that Alex still tried to maintain these friendships, it was emphasized to participants that the unfair treatment Alex endured was beyond her control. As mentioned in the literature, situational attributions are a fundamental way through which the cognitive mechanisms of perspective-taking are engaged (Vescio, Sechrist, and Paolucci 2003). The addition of Alex's story to T2 tests whether cognitive mechanisms of perspective-taking can decrease affective polarization. Hence, T2 tests Hypothesis I. By having T1 and T2 differ only on Alex's story,

Group	Information Presented
Control	Filler Questions
Т1	Casey's Story +
11	Filler Questions
	Casey's Story +
T2	Alex's Story +
	Filler Questions

Table 1: Information Presented According to Experimental Group

the comparison between the groups is more reliable and the effects of cognitive mechanisms of perspective-taking on affective polarization is easier to identify.

Finally, to establish a baseline for comparison and isolate the specific effects of perspectivetaking mechanisms, a control group is also included in this survey experiment. In perspectivetaking studies, participants in the control group usually receive any sort of control intervention unrelated to perspective-taking. For example, in Simonovits, Kézdi, and Kardos (2018), the perspective-taking intervention involved playing a perspective-taking game as an out-group member. The control group, on the other hand, played an unrelated emotion guessing game. In Saveski et al. (2022), both the treatment and the control group were exposed to the Twitter news feed of opposing partisan, but the treatment group received an additional prompt to induce perspective-taking.

The control group representing the absence of exposure to perspective-taking, both cognitive and affective, serves as a reference point against which the effects of perspective-taking on affective polarization can be tested. In this paper, the control group received three filler questions about political attitudes which were also chosen from the ANES. Participants in T1and T2 also received these questions to keep the experimental conditions comparable between each other. As mentioned previously, this was done so that the control group would not have to answer the dependent variable questions twice in a row without being given any questions in between. The additional three questions related to whether the participants think of the U.S. as better than other countries, whether they trust the media, and whether they think the income gap in the U.S. today is larger than it was 20 years ago.

Table 1 presents a schematic description of the information included in each experimental group.

4.3 Dependent Variables

The dependent variable (DV) was measured using a set of four questions designed to capture attitudes and polarization levels toward out-party members. The DV was assessed through a difference-in-differences (DiD) design, which allows for a more robust and straightforward examination of the effect of IV on the DV across different experimental conditions (Kalaian 2008). Hence, all four questions were asked before and after the treatment. The four questions used to measure the DV were:

1. DV1: Marriage Question

Participants were asked how they would feel if their son or daughter married an out-party supporter. For example, if the respondent was a Democrat, the question was worded as, "How would you feel if you had a son or daughter who married a Republican supporter?"

The Marriage Question is a rather popular question featured on numerous earlier surveys with its origin dating back to the 1960s (Almond and Verba 1984). It has been one of the main questions to gauge individuals' sentiments toward interparty contact and prejudice. Responses were collected on a 5-point Likert scale ranging from "Extremely unhappy" to "Extremely happy". Although, other wordings have been used in previous surveys such as "very upset" to "not at all upset", this response format aligns with the most recent methodology employed by Iyengar, Sood, and Lelkes (2012).

2. DV2: Scholarship Question

In the second question, participants were asked to imagine that they are a member of scholarship committee and that they have two candidates to choose from, a Democrat and a Republican. They read that both candidates have the same profile and qualifications, except the out-party candidate has a higher GPA. Following this text, they were asked, "How likely are you to recommend the Democrat applicant for the scholarship over the Republican applicant"? This question was chosen from Iyengar and Westwood (2015). Responses ranged from "Extremely unlikely" to "Extremely likely" on a 5-point Likert scale.

3. DV3: Doctor Question

This question was chosen by the researcher himself. Participants were asked, "Suppose that you know of a good doctor who is a Republican/Democrat (out-party member). How likely are you to recommend this doctor to your friends?". This question captures an additional dimension of attitudes toward out-party members not captured by the previous two questions. The Marriage Question focuses on having an out-party member join one's larger family and the Scholarship Question revolves around decision-making in a hypothetical scenario which most people will never find themselves in. The Doctor Question, on the other hand, delves into participants' willingness to recommend contact with out-party member if they think that they can benefit their in-party members.

4. DV4: Thermometer Scores Toward Out-Party Members

Finally, participants were asked to rate their feelings toward the out-party on a thermometer scale ranging from 0 to 100. Being a widely used and popular ANES question, the thermometer scale measures how "cold" or "warm" one feels toward out-party members. Scores ranging from 0 to 49 indicate that the respondent feels cold toward out-party members, a score of 0 means one feels neither "cold" or "warm", and scores between 51 to 100 indicate that one feels "warm" toward out-party members (Iyengar, Sood, and Lelkes 2012). Various editions of the question were used with some surveys wording it as how one feels toward the "Democratic party" or the "Republican party", and others wording it as "Democrats" or "Republicans". In this survey, the researcher wanted to test how partisans feel solely toward opposing partisans and not politicians of the opposing political party. The question emphasized this as follows:

"What would you rate your feelings toward Democrats (not Democrat politicians, but rather regular citizens who vote Democrat) on a scale of 0 to 100?

On this feeling thermometer scale, ratings between 0 and 49 degrees mean that you feel "cold" toward Democrats (0 being the coldest). Ratings between 51 and 100 degrees mean that you feel "warm" (100 being the warmest). A rating of 50 means you have no feelings one way or the other."

4.4 Control Variables

The main control variable in the study is the respondents' partisan affiliation. Does perspectivetaking have a different effect on affective polarization levels depending on whether respondent is

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a Republican or Democrat? Another control variable is the strength of identity of partisans. Do partisans who identify stronger with their in-party respond to the perspective-taking treatment than those who do not identify strongly with their in-party?

Apart from these two control variables, the study features standard socio-demographic variables such as age, gender, education level, marital status, and ethnicity. As mentioned before, these socio-demographic questions were all chosen from the online question database of the ANES survey.

5 Descriptive Statistics

According to the report provided by Facebook, 930 people clicked on the link leading to the survey out of the 48,432 total reached users. Out of these 930 people, 513 attempted survey and 505 completed it fully which roughly translates to a 1% survey completion rate out of the total number of users reached. Out of the 505 completed surveys, 157 identified their partisan identity as being "Independent" and 26 as "Something else". Those who identified as Independent or Something else were removed from the analysis as they were not assigned to any experimental condition. Furthermore, participants who took less than 120 seconds to complete the survey were also removed. It is likely that these respondents take their participation seriously, especially because all but one was in the treatment groups which took longer to complete because of the perspective-taking stories. Two respondents who listed their age as being under 18 (n=2) were also removed from analysis as the target population was set as those that are older than 18 years of age. Lastly, 3 respondents who listed their gender as "Other" were also removed from analysis for ease of interpretation.

The resulting final sample features 317 participants, 90 of which are Republicans and 227 are Democrats. While 68% of the Republicans identify with their party strongly, this number is for 81% for strong Democrat identifiers. The total sample features 53% females and 47% males. Among Republicans the gender proportions are 38.9% females, and 61.1% males. Among Democrats this is proportions are 58.6% females and 41.4% males. These proportions indicate that females are over-represented among Democrats and males are over-represented among Republicans.

The age group with the highest proportion among both Republicans and Democrats is "65-74" representing 38.4% of the total sample. The second and the third highest proportions are ages "55-64" and "75-84" among both Republicans and Democrats respectively. This shows that older people are significantly over-represented in the survey, taking up roughly 73% of the sample population. This means that the results are subject to age bias. The over-representation of older individuals may have a significant confounding effect in isolating the independent influence of the explanatory variable of perspective-taking on the response variable of affective polarization.



Figure 1: Distribution of Age Groups in the Sample

Within the total sample, 86.1% of the respondents identified as "White, non-Hispanic", 5% identified as "Black or African American, non-Hispanic", 3.5% as Asian, and 2.5% as Hispanic, while the rest are a mix of other ethnicities. Among Republicans 94.4% identified as "White, non-Hispanic". Interestingly, there were no Republican "Black or African American" respondents. The percetage of individuals who identified as "White, non-Hispanic" was 82.8% among Democrats.

Roughly 29% of the total sample had a bachelor's degree or equivalent as their highest level of education acquired. Although Democrats were more educated on average, this difference can only be seen among the highest education levels. For example, whereas 14% of Republicans hold a master's degree or equivalent, this number is 25% for Democrats. When it comes to marital status, 47.3% of the respondents were either married or in a domestic partnership, and 28.4% identified as single (never married). 10% were widowed which when the proportions of age ranges are taken into account, is a fair number. Divorce rates between parties were similar, but more Democrats were single than Republicans (31.2% vs. 21.1%).

Over 54.5% percent of the sample are retired individuals. 17% work full time and 9% are employed part time. There was no significant difference between Democrats and Republicans when it comes to employment, as will be shown in the Chi-Squared Tests below.

5.1 Group Balance Check

The *Qualtrics* randomization tool was helpful in getting similarly sized groups despite having to cut a major portion of the survey respondents. Overall, the control group (C) had 112 respondents, TI had 108, and T2 had 97.

Yet, to check whether respondents were truly randomly allocated to the three experimental conditions, balance check tests were performed for the control variables. Firstly, balance across groups was observed through descriptive tables. Table 2 and Figure 2 show the descriptive distribution of the education and partisan identity strength variables across groups.

Doctorate or Maste	ſ`S
Associate Bachelor's professional High school Less than deg	ee Some
degree degree degree or a high (e.g. M	A, college
(e.g. AA, (e.g. BA, (e.g. MD, DDS, equivalent school M	S, but no
AS) BS) PhD) (e.g. GED) diploma MI	d) degree
C 8 34 6 11 1	23 29
T1 9 29 3 16 0	25 26
T2 5 30 7 14 0	24 17

Table 2: Education Level Distribution per Experimental

Group

Although education appears to be randomized, it is difficult to claim the same for identity strength. To test this formally, chi-squared tests were run. It is crucial to test and see whether the pre-treatment characteristics of the respondents do not differ from each other. Otherwise, it is difficult to claim that the effects of the explanatory variable of perspective-taking treatments on affective polarization levels is independent from extraneous variables.

Table 4 plots all the control variables, except for gender. The Chi-Squared test statistics reveal no significant difference within the distribution of these control variables across the experimental groups. All p-values are above the significance threshold.



Figure 2: Partisan and Identity Strength Distribution per Experimental Group

	Test	ChiSquare	df	p_value
X-squared	Age	9.099734	14	0.82
X-squared1	Ethnicity	6.602146	6	0.36
X-squared2	Education	8.420410	12	0.75
X-squared3	Marital Status	9.784434	8	0.28
X-squared4	Employment	8.249338	16	0.94
X-squared5	Identity Strength	4.592410	4	0.33

Table 3: Chi-Square Test Results for Balance Checks

Yet, the same cannot be said for gender. The unevenness in the distribution of gender across groups is so clear than one can observe it on a descriptive table.

	Female	Male
С	52	60
T1	55	53
T2	61	36

Table 4: Gender Count per Experimental Group

It appears that T2 has a significantly higher proportion of females compared to the control group. As gender was made a binary variable for ease of interpretation, two t-tests were performed to compare gender distribution between T1 & C, and T2 & C formally. In the first test, the gender proportions between T1 and C are distributed evenly enough for the p-value to be 0.51. Thus, we can claim that gender does not need to be controlled when testing the effects of perspective-taking on affective polarization between T1 and C.

Table 5: T-test for Gender Proportions between T1 and C

estimate	statistic	p.value	parameter	conf.low	conf.high	method
0.04	0.66	0.51	217.67	-0.09	0.18	Welch Two Sample
						t-test

Yet, the p-value for the t-test between T2 and C is highly significant (p < 0.05). This suggests that the gender randomization between T2 and C has not worked, and that gender must be taken as a control variable when comparing the effects of perspective-taking on affective polarization between T2 and C.

estimate	statistic	p.value	parameter	conf.low	conf.high	method
0.16	2.41	0.02	204.37	0.03	0.3	Welch Two Sample
						t-test

Table 6: T-test for Gender Proportions between T2 and C

5.2 Perspective-Taking Check

The independent variable of this study, perspective-taking, was operationalized through two stories. The first story which is about a hypothetical out-party supporter called Casey attempts to trigger only the affective mechanisms of perspective-taking. The second story which is about another hypothetical out-party supporter called Alex attempts to trigger both the affective and the cognitive mechanisms of perspective-taking. Both stories were created by the researcher after extensive research into the perspective-taking literature. However, the stories may still not perform their desired goals. Although it is generally accepted that simply asking participants to imagine themselves as the out-group person will trigger affective mechanisms, can we really say that the story of Alex triggers the cognitive mechanisms of affective polarization?

In order to claim that the perspective-taking stories achieved their desired outcomes, meaning that the story of Casey triggers only affective mechanisms of perspective-taking, and the story of Alex triggers both affective and cognitive mechanisms of perspective-taking, two conditions must be satisfied. Firstly, the mean scores given to Casey should be statistically similar between T1 and T2. This would suggest that the respondents in T1 and T2 are not statistically different from each other in their ability to take perspective with the outgroup. In the case that one group has respondents who are better perspective-takers, one can question whether this was because one group are naturally better perspective-takers, or whether it was due another external factor. The second condition is that the mean scores given to Casey and Alex in T2 should be different. If the mean scores given to Alex and Casey are statistically not different in T2, that is, the reported mean likelihood that partisans would vote for the out-party if they were Casey or Alex were statistically not different enough, one cannot claim that cognitive mechanisms of perspective-taking were engaged in the story of Alex. This would make it extremely difficult to test the Hypothesis I, which tests whether the simultaneous exposure to both affective and cognitive mechanisms of perspective-taking has a negative effect on affective polarization levels.

Table 7:	Means	of Pers	pective-	Taking	Variables

Variable	Mean
T1 - Casey	3.111111
T2 - Casey	3.175258
T2 - Alex	3.525773

Both conditions were first tested descriptively by taking the mean likelihood scores given to casey in TI and in T2. The scores for both Casey and Alex were calculated on a 5-point Likert scale. The mean score of Casey's story in TI was 3.11. In T2 the mean score of Casey's story was 3.18, and the mean score of Alex's story was 3.53. The mean scores for Alex's story is clearly higher than Casey's within T2. The variables were then put on a Wilcoxon rank-sum test which offers robustness and flexibility in scenarios where the assumptions of normality may not be met. The Wilcoxon test is also a more a appropriate choice for ordinal variables such as the scores for Casey and Alex, as it takes into account the rank ordering of the data rather than the specific values.

Table 8: Wilcoxon Rank-Sum Test for Casey Scores between

T1 and T2

statistic	p.value	alternative
5068.5	0.6828	two.sided

Based on Table 7 above, there is not enough evidence to claim that the mean scores for Casey's story between the two treatment groups are significantly different. The p-value of 0.68 is greater than the typical significance level of 0.05. The confidence interval also includes the value

of 0, further supporting the conclusion that the means are not significantly different. Hence, it can be concluded that randomization for perspective-taking levels worked because the respondents in the two treatment groups (T1 & T2) had similar baseline levels of perspective-taking.

Next, it was tested whether the mean scores for Casey and Alex differ within T2. Table 9 below suggest that with a p-value of 0.07, there is some evidence, albeit weak, to suggest a significant difference in the mean scores for Casey's and Alex's story in T2. At the conventional significance level, the p-value is greater than 0.05. This means that the cognitive mechanisms of perspective-taking might not have been engaged completely.

However, at a larger significance level ($\alpha = 0.10$), this p-value can be interpreted as significant suggesting that Alex's story successfully engaged the cognitive mechanisms of perspectivetaking. It is also important to note that *T2* had a sample size of 97 respondents which may also affect the interpretation of the results.

Table 9: Wilcoxon Rank-Sum Test for Alex and CaseyScores within T2

statistic	p.value	alternative
5393	0.0693	two.sided

Overall, the two treatment groups are not statistically different from each other in perspective-taking ability. Furthermore, Alex's story, with its elements which trigger the cognitive mechanisms of perspective-taking in addition to affective mechanisms, had higher mean scores than Casey's story in *T2* in this study's sample. Yet, it is difficult to claim statistical significance at the conventional significance level of $\alpha = 0.10$.

6 Analysis & Results

6.1 The Effects of Cognitive and Affective Mechanisms of Perspective-Taking

To test the hypotheses, multiple linear regressions were used. In total, four regression models were conducted for each DV: one for the overall sample, one for Republicans, one for Democrats, and one for the overall sample while controlling for gender. This was done because there was imbalance in the gender distribution among the experimental conditions. The regression tables in this section present only the experimental groups regressed against the 4 DVs. However, results for each model with the added gender control variable can be found in the Appendix B.

6.1.1 DV1: Marriage Question

Firstly, the treatment effects were tested on the changes in attitudes toward the marriage question (DVI). For the overall sample, the regression model did not show a statistically significant effect of TI and T2 (perspective-taking through affective mechanisms and perspective-taking through both affective and cognitive mechanisms, respectively) on changes in attitudes toward interparty marriage of sons or daughters. The coefficients for both TI and T2 had p-values of 0.638 and 0.163, respectively. These results indicate that neither treatment had a significant effect on attitudes toward interparty marriage of sons or daughters.

The results were consistent when the effect was tested solely on Democrats. For Democrats, *T1* and *T2*, had coefficients with p-values of 0.741 and 0.850, respectively, indicating no statistically significant relationship. However, for Republicans, the coefficient for *T1* had a p-value of 0.739, and the coefficient for T2 had a p-value of 0.096. While neither coefficient reached the conventional statistical significance of $\alpha < 0.05$, the effect of *T2* on inter-party marriage attitudes approached significance, and may be considered significant under the significance standards of $\alpha < 0.10$. This suggests that for Republicans, there is some evidence to suggest that perspective-taking which employs both affective and cognitive mechanisms improves attitudes towards inter-party marriage, reducing affective polarization. However, including gender as a control variable increased the coefficient for Republicans to a p-value of 0.125, rendering the

effect of *T2* on improving interparty-marriage insignificant.

Overall, the analysis suggests that neither perspective-taking through affective mechanisms nor perspective-taking through both affective and cognitive mechanisms had a significant effect on changes in attitudes toward interparty marriage of sons or daughters, regardless of gender. Thus, the null hypothesis cannot be rejected for either of the hypotheses.

However, it is still worth noting that the effect of T2 on inter-party marriage attitudes among Republicans approached significance under the significance standard of 10%. This finding implies that perspective-taking, incorporating both affective and cognitive mechanisms, may have some degree of influence on improving attitudes towards inter-party marriage within Republicans.

6.1.2 DV2: Scholarship Question

Secondly, the treatment effects were tested on the changes in attitudes toward the scholarship question (DV2). Although scores increased between the control group (C) to T1 and from T1 to T2, the regression model for the larger sample did not show a statistically significant effect of T1 and T2 (perspective-taking through affective mechanisms and perspective-taking through both affective and cognitive mechanisms) on changes in attitudes toward awarding scholarship to out-party members. The coefficients for both T1 and T2 had p-values of 0.388 and 0.552, respectively. These results indicate that neither perspective-taking condition had a significant effect on affective polarization levels based on the scholarship question.

When the effect was tested solely on Republicans, the results were consistent with the above conclusion. However, in the Democrat sub-group, the control group's (*C*) attitudes changed at the significance level of $\alpha < 0.10$ (p = 0.07). It is expected that the control group's attitude remain the same, and when gender was added as a control variable to the regression, the effect of control group on the scholarship question became insignificant, with a p-value of 0.11. More importantly though, neither *T1*, nor *T2* had a significant effect on changes in attitudes in the scholarship question, including when gender was controlled for.

In summary, neither perspective-taking through affective mechanisms, nor through both affective and cognitive mechanisms had a significant effect on changes in attitudes in the scholarship question. Therefore, the null hypothesis cannot be rejected for either Hypothesis I or Hypothesis II.

6.1.3 DV3: Doctor Question

Thirdly, the effect of the perspective-taking interventions was tested on the doctor question (DV3). The coefficients for both experimental conditions, T1 and T2, were not statistically significant, with p-values of 0.502 and 0.620, respectively. Neither experimental condition had an effect on changing attitudes in DV3. These results were once again consistent when the effect was tested solely on Democrats and Republicans. When gender was controlled for, the results remained the same.

The regression models suggest that neither perspective-taking through affective mechanisms nor perspective-taking through both affective and cognitive mechanisms had a significant effect on changes in attitudes in the doctor question. It can be concluded that the perspectivetaking interventions did not increase the likelihood of the respondents recommending out-party doctors to their friends. Thus Hypothesis I, and Hypothesis II cannot rejected.

6.1.4 DV4: Thermometer Scores

Fourthly, and lastly, the effect of perspective-taking was tested on changes in feelings towards out-party members. Once again, the regression model for the overall sample did not reveal any statistically significant effects of the treatment conditions on changes in thermometer scores. When subsetted into Democrats and Republicans, the results were the same. Adding gender as a control also did not change significance levels of the effects.

This suggests that neither perspective-taking through affective mechanisms, nor through both affective mechanisms and cognitive mechanisms at the same time has an effect on the way partisans feel toward out-party members. Thus, the null hypothesis for both Hypothesis I and for Hypothesis II cannot be rejected.

The following tables provide a summary of the regression models used to analyze the relationship between perspective-taking and affective polarization levels. The tables present the results of the regression analysis for each dependent variable (change in marry (*DV1*), change in scholarship (DV2), change in doctor (DV3), and change in thermometer (DV4)) separately.

Table 10 summarizes the results for all respondents. The subsequent tables 11 and 12 presents the results separately for Democrats and Republicans, separately.

	Dependent variable:				
	Change Marry	Change Scholarship	Change Doctor	Change Thermometer	
 T1	0.037	-0.080	0.081	0.847	
	(0.078)	(0.092)	(0.068)	(1.260)	
T2	0.112	0.056	-0.001	0.643	
	(0.080)	(0.095)	(0.070)	(1.296)	
Control Group	-0.009	0.098	-0.071	0.357	
Ĩ	(0.055)	(0.065)	(0.048)	(0.883)	
Observations	317	317	317	317	
\mathbb{R}^2	0.006	0.007	0.006	0.002	
Adjusted R^2	0.00001	0.0002	-0.001	-0.005	
Residual Std. Error ($df = 314$)	0.578	0.683	0.508	9.343	
F Statistic (df = 2; 314)	1.001	1.032	0.907	0.246	

Table 10: Perspective-Taking and Affective Polarization Levels

Note:

*p < 0.1; **p < 0.05; ***p < 0.01

Table 11.	Perspective-Taking	and Affective Polariz	vation Levels (De	emocrats)
14010 11.	i cispective funing			mooraco

	Dependent variable:			
	Change Marry	Change Scholarship	Change Doctor	Change Thermometer
T1	0.025	-0.137	0.075	1.162
	(0.075)	(0.107)	(0.060)	(1.429)
T2	0.015	0.086	0.018	1.326
	(0.079)	(0.112)	(0.063)	(1.497)
Control Group	0.000	0.137*	-0.062	0.063
-	(0.053)	(0.076)	(0.043)	(1.011)
Observations	227	227	227	227
\mathbb{R}^2	0.0005	0.018	0.007	0.004
Adjusted R ²	-0.008	0.009	-0.001	-0.005
Residual Std. Error ($df = 224$)	0.477	0.679	0.381	9.038
F Statistic (df = 2; 224)	0.056	2.056	0.838	0.491

Note:

*p<0.1; **p<0.05; ***p<0.01

	Dependent variable:			
	Change Marry	Change Scholarship	Change Doctor	Change Thermometer
 T1	0.067	0.071	0.094	0.049
	(0.201)	(0.179)	(0.193)	(2.640)
T2	0.331*	0.000	-0.040	-0.960
	(0.197)	(0.176)	(0.189)	(2.593)
Control Group	-0.031	-0.000	-0.094	1.094
-	(0.137)	(0.123)	(0.132)	(1.804)
Observations	90	90	90	90
\mathbb{R}^2	0.035	0.002	0.006	0.002
Adjusted R ²	0.012	-0.021	-0.017	-0.021
Residual Std. Error ($df = 87$)	0.775	0.694	0.744	10.202
F Statistic (df = 2; 87)	1.555	0.102	0.244	0.093

Table 12:	Perspective -	Taking and	Affective	Polarization	Levels ()	Republicans)
					(

Note:

*p<0.1; **p<0.05; ***p<0.01

7 Discussion

In light of the findings of this study, several discussion points are subject to consideration. To begin with, the main objective of this paper was to test the effect of perspective-taking on affective polarization. The researcher aimed to reduce affective polarization by employing two mechanisms of perspective-taking: affective mechanisms and cognitive mechanisms. Whereas affective mechanisms of perspective-taking work by inducing the emotion of empathy among individuals, cognitive mechanisms work by shifting thinking patterns and mental processes of individuals (Todd and Galinsky 2014). Correspondingly, two hypotheses were formulated:

Hypothesis I: The simultaneous exposure to both cognitive and affective mechanisms of perspective-taking will have a negative effect on affective polarization levels.

Hypothesis II: The sole exposure to affective mechanisms of perspective-taking, without cognitive mechanisms, will have a positive effect on affective polarization levels.

The findings showed that the null hypotheses cannot be rejected. Perspective-taking did not have an effect on affective polarization. Despite no effect, this finding further adds to the conflicting conclusions on perspective-taking within the literature. Studies have found that perspective-taking can have positive, negative, and no effects on out-group prejudice and attitudes. The present study's findings finds no effect of perspective-taking and hence questions whether perspective-taking is a reliable method in changing inter-group attitudes.

An important point to address is whether the perspective-taking stories in this study are internally valid, meaning that they really induced perspective-taking in the respondents. While the treatment stories were designed to elicit perspective-taking, it is possible that the design suffers from a few limitations.

Firstly, the method used to induce perspective-taking in the study was through stories about an out-group member (Casey or Alex) in text form. The story in TI was only 3 sentences, whereas the story in T2 was 4 sentences. The time it took participants to read the story and answer the question which followed might not have been long enough for them to engage in perspective-taking with the out-group member in the story. Furthermore, the stories might not have been engaging enough for the participants to imagine and put themselves in the shoes of the Casey or Alex. Studies which have shown significant effects of perspective-taking on reducing out-group prejudice have incorporated both more engaging and longer tasks for participants to complete such as games, videos, or audio recordings (Simonovits, Kézdi, and Kardos 2018; Dovidio et al. 2004; Batson, Early, and Salvarani 1997).

Secondly, it is difficult to conclude whether the cognitive mechanisms of perspective-taking were truly engaged within the story of Alex in *T2*. The Wilcoxon rank-sum test performed to check whether the scores for Alex's story differed from the scores of Casey's story had a p-value of 0.07. Hence, Alex's story did not have statistically different scores than Casey's story. Yet at the same time, this p-value can be considered statistically significant under a standard of 10%. It would be interesting to test whether the two stories would have statistically different scores using a larger sample, in a different context, and more importantly, on a more representative sample.

Thirdly, the literature points out that the simply asking participants to imagine themselves in the position of the out-group member may induce the affective mechanisms of perspectivetaking (Todd and Galinsky 2014). Could it be argued then that T2 was exposed to the affective mechanisms of perspective-taking two times through two stories, whereas T1 was exposed to the affective mechanisms of perspective-taking only once? The double exposure of T2 to affective mechanisms of perspective-taking could potentially make the two experimental groups subject to incomparability.

It is also important to consider whether the dependent variables used in the study to measure affective polarization levels are internally valid, meaning that they truly measure affective polarization levels among partisans. *DV1*, which asked participants whether they would be happy if their son or daughter married an out-party member may be an extensively used measure in the literature, but it is not exactly clear whether feelings of animosity toward the out-party can be calculated thoroughly through this question. Relationship bond and strength with children may differ among parents. Furthermore, not everyone has children, and not every committed relationships are within the bounds of a marriage. On the other hand, *DV2* asked participants to imagine themselves in a situation which most people will never find themselves in: in a committee which awards scholarships. Hence, the answers given for *DV2* may not reflect affective

polarization levels in real-life settings. *DV3* may also be criticized on the basis that it was created by the researcher himself. The measurement of thermometer scores (*DV4*), which assessed how partisans feel toward out-party members, may also be subject to criticism in terms of its internal validity. While thermometer scores have been commonly used in the literature to gauge affective polarization, it is necessary to question whether it can truly capture the complexity of partisans' feelings toward out-party members. Thermometer ratings are inherently subjective and can be influenced by external factors such as context and personal experiences.

Fourthly, it is interesting to note that the effects of perspective-taking on the dependent variables for Democrats and Republicans did not differ significantly. This suggests that despite inherent differences in political attitudes and beliefs between these two partisan groups, the perspective-taking interventions had a comparable effect on their affective polarization levels. This suggests that further research in affective polarization may not have to worry about taking partisanship into account, and it is an important finding for the contemporary political discourse of affective polarization.

Finally, another limitation of the study is regarding the representativeness of the sample. The sample consisted of mostly older individuals, which does not reflect the demographic composition of the American population. Relying on Facebook users as the primary data source further exacerbates this issue, as it makes the study subject to selection bias and limits the generalizability of the findings beyond Facebook. The sample size and proportions should also be taken in account. There was a noticeable imbalance in the amount of Republicans and Democrats. Out of the 317 respondents, 90 were Republicans, and 227 were Democrats.

8 Conclusion

Overall, this thesis aimed to test whether perspective-taking can be used as a method to decrease affective polarization among partisans in the United States. Through a randomized survey experiment involving 317 participants, varying stories of an out-party member were presented to induce perspective-taking using affective and cognitive mechanisms. The effect of these treatments on affection polarization levels was tested using multiple linear models. The findings indicate that perspective-taking does not reduce affective polarization levels among US partisans. The null hypotheses could not be rejected, suggesting that the employed perspective-taking interventions did not lead to a significant decrease in affective polarization. While these results may appear disappointing, they contribute valuable insights to our understanding of the effects of perspective-taking in a party partisan context.

The impact of perspective-taking interventions depend on many factors, including the design of the intervention, the characteristics of the participants, and the context in which it is being employed. The present study shows that the affective and the cognitive mechanisms of perspective-taking, which have shown promise in other contexts, may not be as effective in reducing affective polarization among US citizens. Further research may explore alternative interventions in reducing affective polarization, and more importantly on more representative samples.

Lastly, the fact that the perspective-taking intervention in this study did not yield any effects does not discount it as a method to reduce inter-group prejudice and hostility. Future studies could attempt to make longer, more engaging perspective-taking interventions, testing other mechanisms, or tailoring the treatment to specific subgroups or contexts.

Appendix A

Survey Questions

[I. Informed Consent]

Dear participant, thank you for your interest to take part in our survey about political attitudes. The survey should take about 7-8 minutes to complete.

By completing the survey, you will have the opportunity to win \$100 as a token of appreciation from our side. Please note that this reward is only applicable to participants who complete the survey in its entirety. The winner will be randomly chosen on the last week of June 2023. If you wish to participate in the lottery, you will have the option to provide an email address at the end of the survey. This will be used exclusively to contact you in case you win the prize. As this research is for a master's thesis, we are not expecting many responses, so your chances of winning are quite high in comparison to larger surveys.

Your privacy is a priority for us. You can be assured that your responses will be kept confidential, and reported only in the aggregate. Due to academic requirements, the analysis and the dataset will be available online at the thesis repository of the Central European University in Vienna, Austria. However, no personal information will be published.

Your participation in this study is voluntary, and you may withdraw at any time. However, we would greatly appreciate your completion of the survey, as your responses will be very valuable to our research. If you have any questions or concerns about this study, please contact [thesis2023ceu@gmail.com].

If you agree to participate in our study, please check the box below. The survey can be answered only once. Thank you again for your participation, and we appreciate your contribution to our research.

[Instruction]

Some of the questions may be asked repeatedly. This is intentional. Please, do not skip them. Thank you!

[II. Demographics]

- 1. What is your gender? Answer(A): Male, Female, Other.
- 2. What is your age? A: Under 18, 18 24, 25 34, 35 44, 45 54, 55 64, 65 74, 75 84, 85 or older
- 3. How would you describe yourself? Please select all that apply. A: White (non-Hispanic), Black or African American (non-Hispanic), American Indian or Alaska Native, Asian, Hispanic, Native Hawaiian or Pacific Islander, Other.
- 4. What is the highest degree or level of school you have completed? A: Less than a high school diploma, High school degree or equivalent (e.g. GED), Some college but no degree, Associate degree (e.g. AA, AS), Bachelor's degree (e.g. BA, BS), Master's degree (e.g. MA, MS, MEd), Doctorate or professional degree (e.g. MD, DDS, PhD)
- 5. Are you now married, widowed, divorced, separated or never married? A: Single (never married), Married, or in a domestic partnership, Widowed, Divorced, Separated
- 6. What is your current employment status? A: Employed full time (40 or more hours per week), Employed part time (up to 39 hours per week), Unemployed and currently looking

for work, Unemployed not currently looking for work, Student, Retired, Homemaker, Self-employed, Unable to work

7. Generally speaking, do you think of yourself as a Republican, a Democrat, an Independent, or something else? A: Republican, Democrat, Independent, Something else

[III. Partisan Identity]

- 8. [IF REPUBLICAN] Would you call yourself a strong Republican or a not very strong Republican? A: Strong, Not very strong, Inapplicable
- 9. [IF DEMOCRAT] Would you call yourself a strong Democrat or a not very strong Democrat? A: Strong, Not very strong, Inapplicable

[IV. Dependent Variable: Affective Polarization Levels - Baseline]

- 9. [IF REPUBLICAN] How would you feel if you had a son or daughter who married a Democrat supporter? A: 5 item scale (1 = Extremely Unhappy, 5 = Extremely happy)
- 10. [IF DEMOCRAT] How would you feel if you had a son or daughter who married a Republican supporter? A: 5 item scale (1 = Extremely unhappy, 5 = Extremely happy)
- 11. [IF REPUBLICAN] Imagine you are a member of a scholarship committee tasked with selecting the recipient of a scholarship. You have two applicants to choose from, one is a Democrat and the other is a Republican. All other qualifications and characteristics are the same for both applicants, except that the Democrat applicant has a higher GPA than the Republican applicant. How likely are you to recommend the Democrat applicant for the scholarship over the Republican applicant? A: 5 item scale (1 = Extremely unlikely, 5 = Extremely likely)
- 12. [IF DEMOCRAT] Imagine you are a member of a scholarship committee tasked with selecting the recipient of a scholarship. You have two applicants to choose from, one is a Republican and the other is a Democrat. All other qualifications and characteristics are the same for both applicants, except that the Democrat applicant has a higher GPA than the Republican applicant. How likely are you to recommend the Republican applicant for the scholarship over the Democrat applicant? A: 5 item scale (1 = Extremely unlikely, 5 = Extremely likely)
- 13. [IF REPUBLICAN] Suppose that you know of a good doctor who is a Democrat. How likely are you to recommend this doctor to your friends? A: 5 item scale (1 = Extremely unlikely, 5 = Extremely likely)
- 14. [IF DEMOCRAT] Suppose that you know of a good doctor who is a Republican. How likely are you to recommend this doctor to your friends? A: 5 item scale (1 = Extremely unlikely, 5 = Extremely likely)
- 15. [IF REPUBLICAN] What would you rate your feelings toward Democrats (not Democrat politicians, but rather regular citizens who vote Democrat) on a scale of 0 to 100? On this feeling thermometer scale, ratings between 0 and 49 degrees mean that you feel "cold" toward Democrats (0 being the coldest). Ratings between 51 and 100 degrees mean that you feel "warm" (100 being the warmest). A rating of 50 means you have no feelings one way or the other. A: (Explained in the question)

16. [IF DEMOCRAT] What would you rate your feelings toward Republicans (not Republican politicians, but rather regular citizens who vote Republican) on a scale of 0 to 100? On this feeling thermometer scale, ratings between 0 and 49 degrees mean that you feel "cold" toward Republican (0 being the coldest). Ratings between 51 and 100 degrees mean that you feel "warm" (100 being the warmest). A rating of 50 means you have no feelings one way or the other. A: (Explained in the question)

[V. Independent Variable – Treatments]

These are provided later, under "Treatments". **[VI. Filler Questions]**

- 17. Generally speaking, is the United States better, worse, or about the same as most other countries? A: Better, Worse, The Same, Don't know
- 18. In general, how much trust and confidence do you have in the news media when it comes to reporting the news fully, accurately, and fairly? A: 5 item scale (1 = None, 5 = A great deal)
- 19. Do you think the difference in incomes between rich people and poor people in the United States today is larger, smaller, or about the same as it was 20 years ago? A: Larger, Smaller, About the same

[VII. Dependent Variable: Affective Polarization Levels - After Intervention]

- 20. [IF REPUBLICAN] How would you feel if you had a son or daughter who married a Democrat supporter? A: 5 item scale (1 = Extremely Unhappy, 5 = Extremely happy)
- 21. [IF DEMOCRAT] How would you feel if you had a son or daughter who married a Republican supporter? A: 5 item scale (1 = Extremely unhappy, 5 = Extremely happy)
- 22. [IF REPUBLICAN] Imagine you are a member of a scholarship committee tasked with selecting the recipient of a scholarship. You have two applicants to choose from, one is a Democrat and the other is a Republican. All other qualifications and characteristics are the same for both applicants, except that the Democrat applicant has a higher GPA than the Republican applicant. How likely are you to recommend the Democrat applicant for the scholarship over the Republican applicant? A: 5 item scale (1 = Extremely unlikely, 5 = Extremely likely)
- 23. [IF DEMOCRAT] Imagine you are a member of a scholarship committee tasked with selecting the recipient of a scholarship. You have two applicants to choose from, one is a Republican and the other is a Democrat. All other qualifications and characteristics are the same for both applicants, except that the Democrat applicant has a higher GPA than the Republican applicant. How likely are you to recommend the Republican applicant for the scholarship over the Democrat applicant? A: 5 item scale (1 = Extremely unlikely, 5 = Extremely likely)
- 24. [IF REPUBLICAN] Suppose that you know of a good doctor who is a Democrat. How likely are you to recommend this doctor to your friends? A: 5 item scale (1 = Extremely unlikely, 5 = Extremely likely)

- 25. [IF DEMOCRAT] Suppose that you know of a good doctor who is a Republican. How likely are you to recommend this doctor to your friends? A: 5 item scale (1 = Extremely unlikely, 5 = Extremely likely)
- 26. [IF REPUBLICAN] What would you rate your feelings toward Democrats (not Democrat politicians, but rather regular citizens who vote Democrat) on a scale of 0 to 100? On this feeling thermometer scale, ratings between 0 and 49 degrees mean that you feel "cold" toward Democrats (0 being the coldest). Ratings between 51 and 100 degrees mean that you feel "warm" (100 being the warmest). A rating of 50 means you have no feelings one way or the other. A: (Explained in the question)
- 27. [IF DEMOCRAT] What would you rate your feelings toward Republicans (not Republican politicians, but rather regular citizens who vote Republican) on a scale of 0 to 100? On this feeling thermometer scale, ratings between 0 and 49 degrees mean that you feel "cold" toward Republican (0 being the coldest). Ratings between 51 and 100 degrees mean that you feel "warm" (100 being the warmest). A rating of 50 means you have no feelings one way or the other. A: (Explained in the question)

[IX. Contact Information]

Please provide any contact information you feel comfortable sharing for us to reach out to you in case you win the \$100 lottery. This can be an email address, phone number, or social media handle. This information will be kept confidential and used solely for the purpose of contacting the winner. A: (Form field)

[IX. End of Survey Screen]

Thank you for completing our survey on political attitudes.

As a token of our appreciation, you have been entered into a lottery for a chance to win \$100. The winner will be randomly chosen in the last week of June 2023, and if selected, we will contact you via the contact details you provided at the end of the survey.

If you have any further questions or concerns, please feel free to reach out to us at [thesis2023ceu@gmail.com].

Wishing you all the best, and we sincerely appreciate your involvement in our research.

Treatments

Treatment Group 1

1. [IF REPUBLICAN] "Casey is not a political person but votes Democrat. Her decision to vote Democrat reflects her deeply-held values and beliefs. Casey holds no negative feelings toward Republicans and keeps an open mind for others' perspectives."

For a brief moment now, imagine that you are Casey. Given the circumstances described, how likely is it that you would vote Democrat?"

A: 5 item scale (1 = Extremely unlikely, 5 = Extremely likely)

2. [IF DEMOCRAT] "Casey is not a political person but votes Republican. Her decision to vote Republican reflects her deeply-held values and beliefs. Casey holds no negative feelings toward Democrats and keeps an open mind for others' perspectives."

For a brief moment now, imagine that you are Casey. How likely is it that you would vote Republican?

A: 5 item scale (1 = Extremely unlikely, 5 = Extremely likely)

Treatment Group 2

1. [IF REPUBLICAN] "Casey is not a political person but votes Democrat. Her decision to vote Democrat reflects her deeply-held values and beliefs. Casey holds no negative feelings toward Republicans and keeps an open mind for others' perspectives."

For a brief moment now, imagine that you are Casey. Given the circumstances described, how likely is it that you would vote Democrat?"

A: 5 item scale (1 = Extremely unlikely, 5 = Extremely likely)

2. [IF DEMOCRAT] "Casey is not a political person but votes Republican. Her decision to vote Republican reflects her deeply-held values and beliefs. Casey holds no negative feelings toward Democrats and keeps an open mind for others' perspectives."

For a brief moment now, imagine that you are Casey. How likely is it that you would vote Republican?

A: 5 item scale (1 = Extremely unlikely, 5 = Extremely likely)

3. [IF REPUBLICAN] "Alex is not a political person but votes Democrat. In the past, she was discriminated against harshly by some close friends who strongly identified as Republicans. For example, she regularly endured careless derogatory remarks about herself, solely because of her Democrat affiliation. Despite her efforts to maintain these friendships, she was never fully accepted or understood.

Alex holds no negative feelings toward Republicans, but the unfair treatment she experienced left her feeling disheartened and affected her voting choices profoundly."

For a brief moment now, imagine that you are Alex. Given the circumstances described, how likely is it that you would vote Democrat?

A: 5 item scale (1 = Extremely unlikely, 5 = Extremely likely)

4. [IF DEMOCRAT] "Alex is not a political person but votes Republican. In the past, she was discriminated against harshly by some close friends who strongly identified as Democrats. For example, she regularly endured careless derogatory remarks about herself, solely because of her Republican affiliation. Despite her efforts to maintain these friendships, she was never fully accepted or understood.

Alex holds no negative feelings toward Democrats, but the unfair treatment she experienced left her feeling disheartened and affected her voting choices profoundly."

For a brief moment now, imagine that you are Alex. Given the circumstances described, how likely is it that you would vote Republican?

A: 5 item scale (1 = Extremely unlikely, 5 = Extremely likely)

Pictures

Figure 3: Picture of Facebook Post Used to Distribute the Survey

Figure 4: Picture of the Informed Consent Displayed in the Survey

Appendix B

	Dependent variable:			
	Change Marry	Change Scholarship	Change Doctor	Change Thermometer
T1	0.036	-0.079	0.079	0.813
	(0.078)	(0.092)	(0.069)	(1.262)
T2	0.109	0.060	-0.008	0.521
	(0.081)	(0.096)	(0.071)	(1.309)
Control Group	-0.021	0.020	-0.047	-0.739
•	(0.066)	(0.078)	(0.058)	(1.062)
Sex	0.002	0.087	-0.046	0.753
	(0.065)	(0.077)	(0.057)	(1.051)
Observations	317	317	317	317
R^2	0.007	0.007	0.008	0.003
Adjusted R^2	-0.003	-0.003	-0.002	-0.006
Residual Std. Error $(df = 313)$	0.579	0.684	0.508	9.351
F Statistic (df = 3 ; 313)	0.701	0.709	0.821	0.325

Table 13: Perspective-Taking and Affective Polarization Levels + Gender as Control

Note:

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*p<0.1; **p<0.05; ***p<0.01

	Dependent variable:			
	Change Marry	Change Scholarship	Change Doctor	Change Thermometer
T1	0.025	-0.138	0.074	1.165
	(0.076)	(0.108)	(0.061)	(1.435)
T2	0.014	0.086	0.015	1.330
	(0.080)	(0.114)	(0.064)	(1.513)
Control Group	-0.003	-0.005	-0.018	0.030
-	(0.065)	(0.092)	(0.052)	(1.231)
Sex	0.001	0.140	-0.054	0.048
	(0.062)	(0.088)	(0.050)	(1.177)
Observations	227	227	227	227
\mathbb{R}^2	0.001	0.018	0.008	0.004
Adjusted R ²	-0.013	0.005	-0.005	-0.009
Residual Std. Error ($df = 223$)	0.478	0.680	0.382	9.058
F Statistic (df = 3; 223)	0.038	1.365	0.598	0.326

Table 14: Perspective-Taking and Affective Polarization Levels (Democrats) + Gender as Control

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 15: Perspective-Taking and Affective Polarization Levels (Republicans) + Gender as Control

	Dependent variable:			
	Change Marry	Change Scholarship	Change Doctor	Change Thermometer
T1	0.073	0.064	0.100	0.216
	(0.201)	(0.180)	(0.193)	(2.634)
T2	0.310	0.024	-0.060	-1.506
	(0.200)	(0.179)	(0.192)	(2.618)
Control Group	-0.111	0.126	-0.106	-2.877
I	(0.172)	(0.154)	(0.165)	(2.251)
Sex	0.041	-0.083	-0.024	2.982
	(0.178)	(0.159)	(0.171)	(2.326)
Observations	90	90	90	90
R^2	0.039	0.010	0.010	0.021
Adjusted R^2	0.006	-0.024	-0.024	-0.013
Residual Std. Error ($df = 86$)	0.777	0.695	0.747	10.165
F Statistic (df = 3; 86)	1.167	0.292	0.299	0.607

*p<0.1; **p<0.05; ***p<0.01

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