The Roots of Affective Polarization: Citizens' Use of Cognitive Shortcuts in a Comparative Perspective

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Abstract

Over the last decade, significant scholarly attention has been given to the concept of affective polarization, whereby partisan groups are found to increasingly dislike each other and express hostility toward one another in both political and non-political settings. While this literature branches out in many different directions, one of its most discussed research questions has to do with identifying the causes of affective polarization. Two theories dominate the field, with a group-based theory stating that affective polarization emerges mainly from the decline of partisan cross-cutting identities, with the increased clustering of social groups into distinct political parties enhancing the perceived alignments between social groups and parties, which enables citizens to project their group evaluations onto political parties. Against it, another theory emphasizes the policy dimension of partisan politics, claiming that the growth of ideological polarization enhances voters' utility differential between parties, which also translates into a greater difference in their affective evaluations of parties.

While debates over the roots of affective polarization develop at a fast pace, I argue in this dissertation that accounting for the cognitive limitations of citizens when processing political information blurs the distinction between the two theories. Through a focus on the use of heuristics to simplify the processing of political information, this dissertation shows that most citizens have a very hard time distinguishing between group appeals and policy commitments, using them as interchangeable pieces of information, known in this dissertation as the "heuristic mechanism".

Three empirical studies are presented to substantiate this argument. The first two present results from experimental studies conducted in Canada, one with a provincial sample and another with a national sample. Both studies demonstrate the struggles that citizens have in distinguishing between policy commitments and group appeals, supporting the use of the heuristic mechanism.

A third study uses observational data to study patterns of affective polarization in Western Europe and finds evidence suggesting that both the group-driven and policy-driven theories are potentially applicable. Yet, the results of a clustering analysis suggest using a different, more encompassing operationalization of voters' in-group that allows multiple parties to be considered part of it may be more appropriate than the binary distinction based on partisan identity, as affective polarization is found to revolve around ideological considerations more so than partisanship-based considerations.

This dissertation provides both theoretical and methodological contributions to the affective polarization literature. It illustrates how even voters' affective reactions are not immune to the cognitive limitations – and ways to palliate them – that are so prevalent in the processing of political information. In doing so, it underscores how our theories need to account for those cognitive limitations, otherwise they are at risk of oversimplifying the reality they seek to explain. Also, the comparative nature of this study further demonstrates that affective polarization as a concept has heuristic value in a broad array of cases, yet its operationalization benefits from being adjusted to account for the multiparty nature of non-American Western world democracies.

Résumé

Au cours de la dernière décennie, la littérature scientifique s'est fortement intéressée au concept de polarisation affective, qui décrit le phénomène où les groupes partisans se détestent de plus en plus. L'une des questions de recherche ayant reçu le plus d'attention concerne les causes de ce phénomène et deux théories dominent les débats. La première souligne l'importance des groupes sociaux en affirmant que la polarisation affective résulte du déclin des identités partisanes transversales. Ce déclin se constate dans l'augmentation de la concentration des groupes sociaux au sein de l'électorat de certains partis, rendant ainsi plus apparentes les alliances entre groupes sociaux et partis politiques et permettant aux citoyens de projeter leurs évaluations affectives des groupes sur les partis au sein desquels ceux-ci se regroupent. Face à cette interprétation, une autre théorie met l'accent sur les enjeux politiques, avançant que la croissance de la polarisation idéologique augmente l'écart entre les bénéfices que les électeurs peuvent attendre des partis politiques, ce qui augmente l'écart entre leurs évaluations affectives de ces partis.

Je développe dans cette thèse l'argument que la distinction entre les deux théories devient nettement plus floue lorsque l'on prend en compte les limites cognitives des individus. En mettant en lumière le rôle des heuristiques dans la manière dont les citoyens traitent l'information politique, cette thèse illustre la difficulté qu'ont ceux-ci à distinguer entre les expressions d'appui envers les groupes sociaux et les engagements politiques des élites partisanes, utilisant ces deux éléments d'information de manière interchangeable. Ce mode de réflexion est appelé « mécanisme heuristique » dans cette thèse.

Trois études empiriques sont présentées afin d'étayer cet argument. Les deux premières présentent les résultats d'études expérimentales réalisées sur des participants canadiens et démontrent la difficulté qu'ont les citoyens à distinguer entre les engagements de politique

publique des partis et leurs expressions de support à l'égard de groupes sociaux, appuyant ainsi l'utilisation du mécanisme heuristique. Une troisième étude utilise des données observationnelles afin d'étudier les tendances au niveau de la polarisation affective en Europe de l'Ouest et constate que les deux théories développées au sein de la littérature, soit l'approche centrée sur les groupes sociaux et celle centrée sur les politiques publiques, apparaissent être probables dans le contexte européen. Cela dit, les résultats d'une analyse de grappes (*clustering*) testant l'applicabilité dans ce contexte de la distinction binaire basée sur l'identification partisane afin d'identifier le groupe d'appartenance (*in-group*) des électeurs offrent un soutien clair en faveur d'une approche plus englobante qui permet à plusieurs partis de faire partie du groupe d'appartenance.

Prise dans son ensemble, cette thèse offre d'importantes contributions théoriques et méthodologiques à l'étude de la polarisation affective. Elle illustre comment les réactions affectives des électeurs ne sont pas immunisées vis-à-vis des limitations cognitives qui sont omniprésentes dans la manière dont les citoyens traitent l'information politique à laquelle ils sont exposés. Ce faisant, cette thèse souligne qu'il est important que nos théories rendent compte de ces limitations, sans quoi elles risquent de présenter une version sursimplifiée de la réalité qu'elles souhaitent expliquer et ainsi nous induire en erreur. Parallèlement, la nature comparative de cette étude démontre que le concept de polarisation affective a une forte valeur heuristique dans un large éventail de cas, bien que son opérationnalisation bénéficie grandement d'un ajustement afin de rendre compte de la différente nature de la compétition partisane dans les systèmes multipartites des démocraties occidentales hors-États-Unis.

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1. Introduction

The political landscape is in constant evolution. Among the many changes that have taken place across Western World democracies in the last decades, one that has received a great amount of attention from scholars, pundits and observers alike is the increased animosity that animates political competition in many Western World democracies. Theorized among political scientists under the broad umbrella of polarization, this increased animosity is now commonly known as affective polarization. This concept relates to the way partisan groups increasingly hate, distrust, and avoid contact with partisans and representatives of other parties.

The concept was developed in the United States, in reaction to the growing animosity and hostility prevailing in the country's partisan landscape. Whereas the phenomenon is identified in a wide variety of political settings, it is particularly evident in the United States, where the bad blood that underlies relationships between Democrats and Republicans systematically makes headlines. While anecdotal evidence of the phenomenon abounds, scientific works have also captured its strong effect. Since the late 1970s, the difference between in- and out-party affective evaluations has nearly doubled (Iyengar et al., 2019). In other words, the magnitude of American partisans' affective preference for their own party over the rival party has doubled in size over the last decades. Other measures of affective polarization point to similar changes over time. The proportion of American partisans who would be displeased by their child marrying a partisan of the other party grew from roughly 5% in 1960 to well over a third in 2010 (Iyengar et al., 2012). These increasing levels of affective polarization are nothing less than daunting, as affectively polarized partisans have been found to de-humanize out-party members (Martherus et al., 2021),

discriminate against out-party job applicants (Gift & Gift, 2015), and put partisan goals before democratic norms (Kingzette et al., 2021).

This potentially very consequential change in inter-party relations in American politics has caught the attention of scholars and developed into a blossoming literature over the last decade. One of the focus points of this literature has been trying to understand the sources of affective polarization, with two strands of research developing in parallel. A first approach focuses on ideological polarization, with scholars claiming that the widening of the ideological distance between parties constitutes the main cause of the growth of affective polarization (Algara & Zur, 2023; Lelkes, 2019; Rogowski & Sutherland, 2016; Webster & Abramowitz, 2017). As ideological differences between the parties become clearer, it also becomes easier for voters to identify which parties best represent their policy preferences and identify which parties support ideas that they oppose (Lupu, 2015). Ideological polarization thus simplifies an otherwise complex political landscape (Somer & McCoy, 2018). As voters develop a clearer view of which parties they like and which ones they dislike, the affective gap between them widens. Accordingly, ideological polarization at the elite level is claimed to be a critical factor enabling the rise of affective polarization.

A second perspective rather focuses on social identities. Scholars working from this perspective claim that affective polarization is the result of social partisan sorting, where individuals who identify with different social groups tend to "sort" themselves into distinct parties. This perspective identifies the decline of cross-cutting identities – i.e., social groups that do not systematically cluster within one of the parties – as a critical factor to explain the rise in affective polarization in the United States (Mason, 2015; 2016; Mason & Wronski, 2018). As social identities map continuously more precisely onto partisan lines, in-group bias and out-group

prejudice toward social groups begin to permeate into citizens' affective evaluations of parties and be projected upon them, based on their favourability toward social groups (Iyengar et al., 2012; Mason, 2015; 2016). The demise of cross-cutting identities creates a social landscape where citizens are increasingly surrounded by like-minded individuals who share their political beliefs, thus creating "echo chambers" that reinforce policy polarization and affective polarization (Hobolt et al., 2024). Even if policy preferences are found to drive affective polarization, they would merely do so by signalling partisan identities (Dias & Lelkes, 2021). This second perspective thus puts self-identities and group evaluations at the heart of the process.

While the two perspectives have distinct theoretical roots, in practice, they are extremely hard to disentangle (Orr et al., 2023). Indeed, group identities and policy preferences are so closely connected that it becomes hard for any study to isolate the effect of one from the other in a realistic fashion – i.e., with high external validity. It is now common knowledge that the great majority of citizens lack time and interest to spend hours informing themselves about politics and thus find ways to "make do" with little political information (Delli Carpini & Keeter, 1996; Downs, 1957). Heuristics are thus commonly used by voters, who rely on pieces of information they acquire haphazardly to draw inferences about other topics.

This doctoral research project argues that such heuristics play a key role in the development of affective polarization. It claims that such process has so far failed to be fully considered even though it has the potential to significantly impact theorization on the causes of affective polarization. In a nutshell, the claim that I put forward in this dissertation is that voters use parties' group favourability and policy commitments interchangeably to form affective evaluations of parties. Voters understand the conceptual difference between policy commitments and group appeals, but most of them assume that appeals to social groups necessarily imply committing to

implementing the policies that these social groups are associated with, i.e., policies that they are publicly rooting for or are perceived to benefit from. Similarly, most voters assume that committing to implementing policies that a social group is known or perceived to be advocating for necessarily implies a positive attitude toward the group and a willingness to further the group's interests through political action. The theoretical consequence emerging from this argument is that both social identities and ideological polarization – rather than one or the other – account for the rise of affective polarization. Trying to disentangle them, which is what many studies in the literature have tried to do so far, may be a misguided endeavour since it fails to accurately reflect the cognitive process that voters go through when affectively evaluating parties. Similarly, leaving aside heuristics to focus on a single of the two mechanisms put forward to account for the rise of affective polarization may not only present a partial picture, but might even be misleading in simplifying a much more complex reality.

The argument put forward in this dissertation – along with the empirical evidence substantiating it – will contribute to the debate on the causes of affective polarization by providing a novel conceptual approach. This new approach abandons the goal of disentangling policy preferences from social identities to better reflect the cognitive process of voters. Based on insights from the political psychology literature showing that individuals use a variety of heuristics to try to maximize the efficiency of their information-acquisition process, I present evidence suggesting that social identities signal policy preferences to voters, and vice versa. The argument put forward in this dissertation opens the door to improved theoretical precision that will enlighten our understanding of the roots of affective polarization. Finally, this dissertation also contributes to the literature on affective polarization by taking it on the comparative turf, with one study focusing on the sub-national case of Quebec, another study focusing on Canada, and a third focusing on an

array of Western European countries. In doing so, I investigate whether the theories that were developed in the peculiar American context are applicable to other contexts. The results suggest that both mechanisms likely play a role in other polarized democracies, although affective polarization needs to be operationalized in a different fashion than in the United States when investigating it in multiparty contexts.

1.1. Heuristics and the Citizen Competence Problem

The limited information-processing capacity of voters has received a significant amount of coverage since Downs' seminal piece highlighting the high costs and low returns of acquiring political information (Downs, 1957). Downs' argument combines well with the findings of the Columbia school which demonstrate that citizens' vote choice is first and foremost determined by their group membership, leaving little leverage to policy issues and political values (Lazarsfeld et al., 1948). Ever since Downs detailed the irrationality of seeking political information given voters' marginal impact on electoral outcomes, scholars have been interested in detailing how voters can still make an informed decision. A pessimistic perspective has dominated the literature, spearheaded by Converse's worrisome findings suggesting that most voters lack knowledge of even the most fundamental political facts (Converse, 1964). Many have replicated similar findings, reinforcing Converse's claim that most citizens lack basic political knowledge and ideological constraints in their policy preferences (Butler and Stokes, 1975; Delli Carpini and Keeter, 1996; Luskin, 1987). Zaller's important work also illustrated how most voters fail to update their preferences when exposed to new pieces of political information that should, in theory, impact their attitudes (Zaller, 1992). Building on these findings, studies have raised serious concerns for

democracy because of such a lack of political fundamentals among voters (Achen and Bartels, 2016; Bartels, 2003).

Although some have challenged the extent of citizens' lack of political information, notably on methodological grounds (e.g., Achen, 1975; Ansolabehere et al., 2008; Erikson, 1979; Judd and Milburn, 1980), a consensus emerges within the literature around the fact that most voters lack a precise understanding of most important political facts (Kuklinski and Peyton, 2007). Yet, as disheartening as this conclusion may be, the literature also provides grounds for optimism, as it stresses how even without a sound awareness and understanding of even the most fundamental political facts, citizens can still take a meaningful stance on issues and make an informed decision when casting their vote. The Michigan School of voting behaviour, with its emphasis on partisan identity as a driver not only of citizens' vote, but also of their political attitudes and candidate evaluations (Campbell et al., 1960), set the table for a vast literature to develop around voters' use of cognitive shortcuts – i.e., heuristics – to make sense of politics. Focusing on the partisan heuristic, the Michigan scholars emphasized how voters can use cues to make sense of politics. Simply put, for many voters who identify with a party, learning that "their" party favors a certain political option is enough for them to also endorse the option, having the conviction that their preferences align with "their" party's.

The partisan heuristic is most likely the best-known heuristic used by voters, but there are many others. Formally, Sniderman and colleagues describe heuristics as "judgmental shortcuts, efficient ways to organize and simplify political choices, efficient in the double sense of requiring relatively little information to execute yet yielding dependable answers even to complex problems of choice." (Sniderman et al., 1991: 19). In short, heuristics allow voters to use simple pieces of information to inform their choices on complex political matters without needing to pay the high

costs of acquiring and processing information on these matters. It's an extrapolation process that allows voters to circumvent their lack of information. Heuristics abound in voters' political thinking. I already mentioned the partisan heuristic (Campbell et al., 1960), there is also the likeability heuristic (Sniderman et al., 1991), the deservingness heuristic (Petersen, 2012; Skitka and Tetlock, 1993; van Oorschot, 2000), physical appearance (Ahler et al., 2017; Lenz and Lawson, 2011; Riggle et al., 1992), to name only a few of those that received extensive coverage.

To what extent heuristics allow voters to overcome their lack of information and behave as efficient democratic citizens is an open debate. Some have offered optimistic perspectives, such as studies demonstrating that most voters can approximate the voting behaviour of fully informed citizens by using heuristics (Lau and Redlawsk, 1997; Lau et al., 2008; Lupia, 1994). Yet, other studies present a more pessimistic outlook. Some argue that heuristics are most beneficial to already well-informed citizens, whereas they can lead astray those that need them the most, i.e., the lesser informed citizens (Lau and Redlawsk, 2001). Others suggest that heuristics fail to compensate for a lack of information, which leads to significant deviations from fully informed voting behaviour at both the individual and collective levels (Bartels, 1996). Accordingly, the extent to which heuristics can help voters mitigate their lack of information and behave as depicted in democratic theory is not exactly clear, but a survey of the literature suggest that they help most citizens to some extent. Nevertheless, what remains clear and undisputed is the widespread use of heuristics by citizens of all backgrounds and the central place it occupies in political information processing.

1.2. Heuristics and Affective Polarization

Considering the above, it is quite startling that heuristics have yet to receive significant attention in the affective polarization literature given the latter's emphasis on the psychological roots of the phenomenon. Indeed, the literature converged on two competing theories seeking to identify the process whereby voters become affectively polarized. On the one hand, policy considerations would be at play, with voters liking parties that share their policy preferences and disliking those that support opposing policies. On the other hand, voters would be focused on group attitudes, expressing positive sentiments toward parties aligned with liked social groups and negative sentiments toward parties aligned with disliked social groups.

Given their ubiquity in the way voters process political information, it is to be expected that heuristics also come into play in the development of affective polarization. Whether voters like or dislike a party cannot realistically be expected to be immune from the process of "low-information rationality", whereby voters mitigate their lack of political information and sophistication by using a variety of cognitive shortcuts (Popkin, 1991). This is even more so the case when we take a close look at both the policy-driven and the group-driven approaches to affective polarization. Each mechanism rests on the informal assumption that voters have a fair amount of knowledge about politics, an assumption that the political knowledge and sophistication literature leads us to believe may be overly optimistic.

On one side, there is the policy-driven mechanism, which states that voters become polarized toward parties as the latter adopt more radical policy commitments, i.e., as the "policy gap" between them widens. For this mechanism to properly operate, citizens need to have a sound knowledge of important pieces of information. For one, they need to have clear policy preferences themselves, which many important works suggest may not be the case (Butler and Stokes, 1975;

Converse, 1964; Delli Carpini and Keeter, 1996; Luskin, 1987). Without policy preferences of their own, voters cannot evaluate the "policy gap" between their own preferences and the commitments of parties, thus making the mechanism inapplicable. Yet, even if most voters have "true" issue preferences, there are still some substantial knowledge-based impediments to the mechanism's applicability. Most importantly, voters need to be aware of parties' policy commitments, which again may be quite a strong assumption. Importantly, they need to be aware of all major parties' positions on the issue, as affective polarization implies a gap being created between two or more parties, so being informed about a single party is not sufficient to yield affective polarization. Accordingly, this requirement becomes even harder to meet when there are many parties competing for seats, as this implies a more extensive information-acquisition process. Finally, the policy-driven mechanism often focuses on the aggregation of all important issues rather than focusing on a single issue, therefore assuming that voters can aggregate all of their policy preferences, then aggregate all of each party's policy commitments, and then compare those aggregated commitments to their own aggregated preferences. This is a substantial task for voters, given that most are likely to have little knowledge and interest in politics.

These cognitive steps are usually not emphasized in the literature but are nevertheless implied by the nature of the policy-driven mechanism. They require an intensive amount of cognitive work that the literature suggests voters may not be willing to do. Indeed, voters are much more likely to have an imperfect understanding of most issues, an unclear position on them and a sub-optimal knowledge of all parties' stance on most issues. Nevertheless, developing an affective evaluation of parties is an important component of their voting decision. Accordingly, unless totally uninterested in politics, voters operating as the policy-driven mechanism states are still bound to try and evaluate parties to guide their vote choice. To do so, heuristics can come in handy.

They allow voters to form preferences on issues without fully understanding the technicalities of all policy options (Lupia, 1994). They also allow voters to infer about parties' stance on issues through cognitive shortcuts based on a variety of information, such as their leader's gender (McDermott, 1998; Sanbonmatsu, 2002). It is thus reasonable to expect that if policy considerations are indeed at the heart of the process of affective polarization, heuristics play a role in such process given the complexity and breath of information that voters need to consider.

Among alternate accounts of the roots of affective polarization, the main competing mechanism focuses on affect toward social groups and leaves as much room – if not more – for heuristics to come into play. Here, the theory states that group attitudes are at the heart of the process. When voters feel that parties are aligned with social groups, they project their attitudes toward the social groups onto the parties that are aligned with them. Accordingly, when parties are aligned to groups they like, their affective evaluations of the parties become warmer, and they become cooler when they are aligned to disliked groups.

Extensive research supports the idea that voters' attitudes toward parties reflects their affect toward groups that are (perceived as) part of parties' main electorates (Green et al., 2002; Mason, 2016). Yet, for that process to operate, voters need to be able to precisely identify which social groups form part of a party's electoral coalition. Unfortunately, voters appear to perform poorly at this task, largely overstating the share of party-stereotypical groups (Ahler and Sood, 2018). Indeed, identifying the social groups that form part of a party's electoral coalition is an information-intensive task. It requires for voters to learn about social groups' political preferences, a piece of information that is much less straightforward to acquire than learning about a party's policy commitments. Although parties often engage in group appeals (Thau, 2018; 2019; 2021), their appeals potentially convey more information about groups that they would like to include in

their coalition than groups that are already part of it. Further, these group appeals are tentative and carry no guarantee of results. To make matters worse, parties' electoral coalitions are constantly in flux, as they evolve over time with some groups becoming more "centralized" within a party and others progressively moving over to another or becoming orphans (Aldrich, 1995; Bawn et al., 2012). Although such change is slow and typically gradual, it nevertheless always occurs, as party elites are constantly adapting their party's position in reaction to new issues and demographic changes in a bid to position the party more favourably within the political landscape and enhance its electoral prospects (Karol, 2009). The arrival of new parties and the demise of established ones – a frequent occurrence in multiparty systems – can contribute to shock electoral coalitions and reshape them significantly, enhancing the cognitive burden on voters as they need to quickly update their information on parties' electoral coalitions.

In the face of such complexity, it is unrealistic to expect voters to be fully informed and up to date on parties' electoral coalitions given voters' middling levels of political information and lack of desire to spend much time informing themselves. Accordingly, to learn about a party's electoral coalition, most voters are likely to resort to using heuristics to make what appears to be a daunting task more manageable. The place of such cognitive shortcuts in the group-driven mechanism to affective polarization also received scant attention so far, yet it appears that it would occupy a central role in how this process operates in voters' minds.

This dissertation sets out to address this important theoretical gap by putting front and center the role that heuristics occupy in each of these mechanisms. In doing so, it identifies another, related challenge that has so far mostly been mentioned in passing: the use of heuristics may mean that both mechanisms are in fact interconnected and not as contrasting as the bulk of the literature suggests. Indeed, most of the literature focuses only on one mechanism at a time, leaving the other

aside (for the policy-driven mechanism, see Banda and Cluverius, 2018; Bougher, 2017; Fiorina, 2016; Lelkes, 2018; Rogowski and Sutherland, 2016; Webster and Abramowitz, 2017; for the group-driven mechanism, see Harteveld, 2021a; Mason and Wronski, 2018; Robison and Moskowitz, 2019) or directly pits them one against the other as competing explanations (Huddy and Yair, 2021; Lelkes, 2019; Mason, 2015; 2016; 2018). Other studies address both mechanisms simultaneously, yet without accounting for their possible interconnection (Bantel, 2023). Finally, some studies hint at this possible interconnection, but they remain marginal within the literature to this day. Dias and Lelkes (2021) and Orr et al. (2023) form part of the rare empirical papers directly addressing this interconnection, although the main purpose of their study is to identify the mechanism weighing most heavily in voters' considerations, thus again pitting them against one another. Further, their experiments focus strictly on the American party system, which given its extremely stable two-party nature, is arguably a case where heuristics are of less value given the straightforward nature of the party system, which should simplify voters' information-acquisition and information-processing tasks.

This dissertation thus complements the affective polarization literature by focusing directly on the role of heuristics in the development of affective polarization. In doing so, it raises a theoretical issue with the watertight separation between the policy-driven and group-driven mechanisms that underlies most studies on the topic. By doing so, it seeks to bring theorization on affective polarization more in line with how voters process political information and form attitudes.

1.3. Studying Affective Polarization at the Individual-Level

In addition to the theoretical contribution noted above, this dissertation also innovates methodologically by providing a novel individual-level operationalization of affective polarization. In essence, affective polarization is the result of voters' attitudes toward parties becoming more distant. As Iyengar et al. (2012) note in the United States, in-group attitudes have remained mostly stable over the last decades, but out-group attitudes have become much cooler. As American partisans' attitudes toward the opposing party worsens while their attitude toward their own party remains stable, an affective gulf appears between their in-party and out-party attitudes. The fact that this pattern is prevalent among most partisans explains the collective outcome that we have come to know as affective polarization.

Yet, underlying this collective pattern is an individual process whereby most partisans' attitudes shift in a similar manner. Indeed, for a voter to make affective polarization possible, their own party attitudes need to be polarized, i.e., they must be much more favourable to a party than to its rivals. By displaying such polarized pattern of affective evaluations of parties, voters make affective polarization possible at the aggregate level. Only when many voters adopt such polarized party attitudes can affective polarization occur. Accordingly, a prevalent pattern of polarized affective evaluations of parties at the individual-level is a prerequisite for affective polarization to occur at the collective level.

Yet, the literature has so far focused on the aggregate phenomenon, i.e., polarization of the electorate, paying little attention to the individual-level affective evaluations which underly this phenomenon, i.e., polarization of each voter's perceptions of parties. Such aggregate-level focus, while intuitive, also brings several limitations with it. Importantly, aggregate measures of affective polarization – whether at the election-level or the country-level – inform us on which electorates

are polarized but wash away all internal differences with regards to polarization. It is possible that some citizens are more polarized than others, and may thus be driving the phenomenon, yet these aggregate measures make it impossible for us to know exactly who is polarized. This is detrimental to our understanding of affective polarization, as both mechanisms that are being put forward to account for its rise are, in fact, individual-level theories. Indeed, one posits that voters' policy preferences have become more distant from rival parties, whereas the other states that voters' group attitudes are being projected onto political parties. Unfortunately, these individual patterns have not received much attention yet. Studies rather focus on aggregated levels of polarization, which raises concerns with the ecological fallacy, as individual attitudes are aggregated, patterns are then identified within these aggregated measures and theorical discussions then move back to the individual level, focusing on individual factors found to sustain affective polarization. The political behaviour literature contains examples of relationships between outcome and explanatory variables that run in opposite direction at the individual and aggregate level, such as that between wealth and vote choice in the United States (Gelman et al., 2007).

Further, the literature's focus on studying affective polarization at the aggregate level also prevents any ability to identify patterns of heterogeneity within voters, thus forcing theories to remain high-level and all-encompassing. Some studies have introduced affective polarization measures at the individual level (Wagner, 2021; Reiljan, 2020), but their operationalization is less detailed than the one that I introduce in this dissertation. Indeed, the previous measures inform us about how polarized toward the whole party system are voters, but they do not capture affective polarization toward each party individually. The more granular measure that I introduce allows us to understand precisely who is polarized and toward which party exactly, something that could not be done with previous individual-level operationalizations of affective polarization. This is

important to allow us to gain a deeper understanding of the phenomenon, as I argue that the literature has become ripe for more detailed investigations, which may help us understand why two theories – that many see as competing – simultaneously find widespread empirical support.

Accordingly, rather than aggregating together each voter's perceptions of all parties to provide a single index of affective polarization per voter, the outcome variable in all three studies is a voter's affect toward each party individually. While this change may seem minor, it entails numerous methodological, conceptual and theoretical implications. Methodologically, a very important benefit to be reaped from this new operationalization of affective polarization lies in larger sample sizes, resulting in much greater statistical power. Although theoretical considerations guided the shift to a more fine-grained level of analysis, this methodological side effect is itself highly valuable. Yet, the main positive effect that it brings for my analysis is the capacity to analyze specific subpopulations, allowing me to model the implications of theorical mechanisms in a more specific fashion that what has mostly been done so far. Other theoretical and conceptual implications of this new operationalization, along with an extended methodological discussion of it, will follow in each of the three studies that constitute the body of this dissertation.

Opting to operationalize affective polarization at the voter-level rather than the macro-level is not without its downsides though, the main limitation being that this dissertation does not speak directly to affective polarization but rather focuses on the individual affective evaluations of each party, which taken together may result in affective polarization. While strongly connected to affective polarization, there remains a disconnect between the two concepts. Indeed, polarized affective evaluations at the individual level may not directly translate into a high level of affective polarization when aggregating such evaluations. Indeed, when attitudes or behaviours are aggregated, some underlying patterns have sometimes been lost, or even reversed (e.g., Gelman et

al., 2007). The three studies have thus been written carefully to avoid inferring that any individual-level pattern necessarily translates into a collective pattern and are also cautious not to interpret any result as speaking on affective polarization as a collective phenomenon. Accordingly, while taking such caveats very seriously, I nevertheless believe the pros of using this individual-level approach far outweigh the cons. This novel operationalization provides a richness of details that also brings the analysis in line with the theories being tested, as the latter speak to individual patterns that have so far been mainly brushed aside in favour of aggregated patterns.

1.4. Taking the Affective Polarization Literature Outside of the United States

Although the affective polarization literature is burgeoning, it remains very US-centric, as most studies on the topic, whether empirical or theoretical, tend to focus exclusively on the American context. This is concerning as the concept – which has established itself within comparative politics over the last decade – is becoming increasingly used to describe other political environments, beyond the American boundaries. The very applicability of the concept to other cases remains to be proven, especially given the numerous profound differences between the American political system and other Western World political systems. This is an issue that Americanists and comparativists themselves have raised in their call for more engagement of the literature on the comparative turf (Bantel, 2023; Gidron et al., 2019; Harteveld, 2021a; 2021b; Iyengar et al., 2019; Kekkonen and Ylä-Anttila, 2021; Reiljan and Ryan, 2021).

Considering my dissertation's focus on the political psychology underlying affective polarization, the most important difference lies in the nature of the party system. In the United States, political competition revolves around a two-party system that has endured for well over a

century. Accordingly, no living American voter has experienced a federal election where a third party gathered enough momentum to be a serious contender for the presidential office. Given the stability of their party system, voters can constantly recycle their prior knowledge of parties' positions on issues and simply update their pool of information when new issues arise. It is thus comparatively simple for voters to be aware of parties' policy commitments and group alignments, especially with regards to salient groups and issues. Voters in multiparty systems have a much more challenging task. They are often faced with significant disruptions of their party systems, as parties tend to be created, to merge, be replaced or fade into marginalization at a much higher rate (Mainwaring et al., 2017). Even when parties remain intact, the regular disruptions of the party system in which they operate can force them to re-position themselves to establish a clear ideological distance with their competitors. Recycling prior information is therefore not as good of a strategy as it is in the United States, as such prior knowledge is significantly more likely to be outdated in the case of pre-existing parties or altogether non-existent in the case of new parties. Again, with voters' limited capacity and willingness to seek political information on parties, it is thus likely that the average voter in non-US Western World democracies has less information on parties that they are choosing from than their American counterparts. Adding to their burden, they often have more than two non-marginal parties to choose from, thus forcing them to obtain, update and store information on multiple parties at once, whereas Americans must only do so for two parties. Evidence suggesting that the number of parties running during an election negatively correlates with voters' probability of "voting correctly" is in line with such expectation, as it is likely that the more parties there are, the smaller is the typical voter's pool of information on each party (on correct voting, see Lau and Redlawsk, 1997; for comparative evidence, see Lau et al., 2013).

The more complex nature of multiparty systems makes it such that voters are less likely to have a sound understanding of parties' policy commitments and group alignments compared to American voters. Being unsure of those two key pieces of information may potentially prevent them from becoming polarized as their American counterparts, although comparative studies have identified similar and sometimes even higher polarization levels than in the United States (Wagner, 2021), although the rise in affective polarization is found to have been much stronger in the United States compared to other Western democracies (Boxell et al., 2024). In light of such puzzle, more comparative studies on the topic are needed to fully ascertain the extent and the roots of affective polarization in other Western democracies and how they relate to American polarization.

Further blurring the comparison, the American two-party system almost naturally lends itself to affective polarization, as each party focuses its full attention on beating its lone rival. All criticism is therefore directed toward the same party – in a reciprocal manner – with both parties being directional opposites on all salient issues. In contrast, parties in multiparty systems tend to share positions on at least a few issues, and criticism of other parties is spread across multiple rivals rather than only one. Multiparty systems also reduce the ideological space to be occupied between parties, thus allowing parties with similar – albeit non-identical – platforms to co-exist (Blais and Bodet, 2006). Taken together, these factors make it much less straightforward for voters to draw the line between their in-group and the out-group. Whereas the distinction falls naturally in place in the American two-party system, that is not the case in multiparty systems where parties often share policy commitments with some of their competitors and focus their attention on criticizing many parties at once rather than one. In sum, it is unclear how the boundary between in-group and out-group is formed in voters' minds. The in-group could be made of only the voter's favoured party or could also include ideologically compatible parties. As for the out-group, it could

potentially include their favoured party's main rival or the least ideologically compatible parties or even all parties except their favourite. Given the centrality of this in-group/out-group boundary to the notion of affective polarization, clarifying how such boundary is drawn is critical to understanding whether affective polarization as a concept has a heuristic value beyond the American context.

1.5. Overview of the Dissertation

Can citizens really set apart parties' and politicians' policy commitments from their group attitudes? The radicalization of the former and the homogenization of the latter within parties have been identified as sources of affective polarization. Yet, there are serious reasons to believe the literature may benefit from accounting for voters' cognitive limitations when making such arguments. Policy commitments and group attitudes may be separate concepts but parsing them out is likely to be a substantial challenge for most voters. With limited time and interest to allocate to politics, the use of heuristics to process political information is ubiquitous among citizens. Recycling pieces of information to infer about other topics that are assumed to be connected, they help voters maximize the efficiency of their time and energy. Policy commitments and group attitudes are two such concepts that are empirically intrinsically connected and are thus perfect candidates to serve as heuristics for one another. Given these considerations, it is unclear whether one factor can be singled out as the cause of affective polarization, as both may instead have a role to play in the process.

To answer this theoretical puzzle, my dissertation provides a wealth of empirical evidence based on three diverse and complementary individual-level studies. The first of those revolves

around a priming experiment that was embedded in an electoral survey conducted during the 2022 Quebec provincial election. Taking advantage of the popular support that the previously marginal Quebec Conservative Party (QCP) benefited from during the election, the experiment primes respondents with one of three experimental conditions, the first of which primes a policy commitment from the QCP that suggests negativity toward Quebec's anglophone minority, i.e., the QCP's support for Bill 21 which prevents some public servants from wearing visible religious symbols during their working hours, a law that was profoundly criticized and challenged among Quebec's anglophone community. A second experimental condition primes respondents with a quote from the QCP party leader expressing support for the anglophone community and its aspirations, a group appeal that would suggest positivity toward Quebec anglophones and their preferred policies and thus provide opposite cues from the first experimental condition. Finally, a third of respondents were presented with a control condition that provides no group appeal nor policy commitment. Voters having little prior knowledge of the QCP made the latter a great candidate to assess the heuristic mechanism underlying this dissertation, as voters exposed to a prime were likely to use it to extrapolate about other pieces of information on the party. The shallowness of their pre-existing knowledge of the party makes their perceptions likely to be swayed, as for most voters this knowledge would amount to little more than a diffuse prior in Bayesian terminology. In contrast, their perceptions of other, better-known parties, on which they have accumulated more information and thus have more specific prior perceptions, are much less likely to be impacted.

The results of the experiment provide partial support for the heuristic mechanism. The connection between policy commitments and group favourability in voters' minds is not clearly identified, yet I do find valuable empirical evidence supporting the use of heuristics by voters when

processing the QCP's group appeal. Further, the analysis uncovers some impact on affective evaluations of the party. While support for the heuristic mechanism is only partial, this study nevertheless justifies digging deeper into the matter and identifies key limitations that created noise in the experiment, thus setting the table for my second study, which overcomes those limitations.

The second study in this dissertation also relies on an experimental manipulation embedded in a public opinion survey, but this time uses a vignette experiment and a full Canadian sample. The survey presented respondents with fictitious independent federal election candidates. Fictitious independent candidates were used to avoid having party labels – the strongest heuristic of all – overshadow policy commitments and group appeals as heuristics in their own right. Respondents were shown four different vignettes, each including either a randomized group appeal, a randomized policy commitment, or a control condition, with candidates' sociodemographic background also being randomized. This study finds unqualified support for the heuristic mechanism. When exposed to candidates' group appeals, respondents made inferences about their policy commitments that were in line with the group appeal, and vice versa when shown a policy commitment instead. Such inferences also impacted affective evaluations of candidates, as inferred group attitudes and inferred policy commitments led to warmer affective evaluations when in line with voters' own attitudes and led to cooler affective evaluations when they ran against voters' attitudes. This study thus underscores how voters use group appeals and policy commitments as interchangeable pieces of information and then use such extrapolations to adjust their affective evaluations of candidates.

The third study in my dissertation uses a different empirical approach and geographical setting, as it leverages observational data to investigate patterns of affective evaluations of parties in Western Europe. This study focuses most directly on the issue of the "exportability" of

American findings on affective polarization. While keeping the heuristic mechanism as a backdrop, it nevertheless tests each mechanism separately to see whether they even stand the test of empirical scrutiny in a setting which profoundly differs from the American political environment. Further, to assess the value added of the individual-level operationalization of affective polarization used in this research project – focusing on voters' affective evaluations – it analyzes patterns of affective polarization to test whether the in-group/out-group binary distinction that prevails in the American literature similarly applies to multiparty systems. The results provide strong evidence in favour of my individual-level approach that leaves aside the binary distinction, as affective polarization is found to often cluster in more than two groups of parties. Through such findings, this third study lends further credence to the literature suggesting that European partisans can be grouped in "camps" where voters have similarly negative and positive attitudes toward multiple parties at once (Kekkonen and Ylä-Anttila, 2021; Reiljan and Ryan, 2021) and underscores the need to move beyond the binary in-group/out-group distinction. Further, both the policy-driven and group-driven approaches to affective polarization are found to be plausible in the Western European context, although the evidence is weaker for the group-driven mechanism. Closing the loop with the previous two studies of the dissertation, a cursory overview of the patterns identified for each mechanism reveals a similarity suggesting that the heuristic mechanism may also apply in Western Europe and warrants further investigation on the topic.

With its three empirical studies, this dissertation contributes to profoundly expand our understanding of affective polarization. Theoretically, it sheds light on the significance of the use of heuristics in voters' affective evaluations of parties. In doing so, it challenges the perceived independence of the two theories that have been put forward to account for affective polarization. The main theoretical insight that can be gleaned from the empirical evidence presented in this

dissertation is that most voters are very likely to perceive policy commitments and group appeals as two interchangeable pieces of information and thus process them in a very similar fashion when evaluating parties and candidates. This finding invites us to re-think both mechanisms and focus on their interconnection rather than their differences.

This dissertation not only helps us learn more about affective polarization, but it also underscores the differences in how affective polarization manifests itself in the United States and how it does so in multiparty systems. Importantly, this research project underscores that affective polarization is not always about only two partisan sides, as it is in the United States. It rather revolves around multiple parties – typically grouped in ideological poles – and can also have multiple poles, not only two. This important finding invites us to re-think how we operationalize affective polarization to leave aside the binary in-group/out-group distinction that prevails in the United States. In multiparty systems, it appears that voters can be polarized toward multiple parties simultaneously, i.e., they can have strong positive sentiments toward multiple parties and strong negative sentiments toward multiple other parties (Kekkonen and Ylä-Anttila, 2021; Reiljan and Ryan, 2021). As such, partisanship as an indicator of group identity that maps onto affective evaluations of parties might only operate in the United States – and potentially other similar two-party systems – as the nature of affective polarization in multiparty systems appears to be different, revolving more closely around ideology than partisanship. The results presented in this study, especially in the first and third study, thus lead me to suggest that we use a different approach to group identity when studying affective polarization in multiparty systems and acknowledge the possibility that many parties may be part of a voters' in-group, while many parties may also be part of a voter's out-group.

Finally, this dissertation also puts forward an important methodological contribution. In line with the finding above, it offers a novel operationalization of affective polarization at the individual-level which does not average across voters' evaluations of parties and thus strengthens the literature focusing on the operationalization of affective polarization within multiparty systems (Reiljan, 2020; Wagner, 2021). Allowing us to assess in greater detail the connection between, first, a voter' policy preferences and a party's policy commitments, and second, a voters' group attitudes and a party's group appeals, this new measure opens the door for more intricate analyses uncovering the full extent of heterogeneity in voters' affective evaluations of parties. This methodological improvement thus permits the literature to move past the high-level associations and patterns that have been found so far.

These many contributions emphasize the importance of more directly and explicitly integrating insights from the heuristics literature into the affective polarization literature and to operationalize affective polarization in a context-specific way. The differences between affective polarization in the United States and in multiparty systems are not so large as to warrant a complete re-theorization of the concept, but its operationalization benefits from being adjusted.

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First Study

2. An integrative framework of voters' affective evaluations of parties: policy, groups and heuristics. Evidence from Quebec.

The literature on affective polarization has burgeoned over the last decade and is progressively clustering around two competing theories that intend to account for the phenomenon. Each of these theories provide valuable insights to help us understand the determinants of voters' affect toward parties. A first perspective identifies ideological polarization as the main source of affect, claiming that voters translate their ideological proximity with parties into affective evaluations (Algara & Zur, 2023; Banda & Cluverius, 2018; Rogowski & Sutherland, 2016; Webster & Abramowitz, 2017). Accordingly, perceived ideological proximity between a voter and a party positively correlates with the former's affect toward the latter. A second perspective rather focuses on social partisan sorting, claiming that the decline of cross-cutting identities makes partisan groups more homogenous, which strengthens the boundary between in- and out-groups (Mason, 2018; Mason & Wronski, 2018). The increased alignment of social groups with political parties in turn allows voters to project their feelings toward social groups onto parties they cluster within, leading to positive affect toward parties aligned with liked groups and negative affect toward parties aligned with disliked groups (Robison & Moskowitz, 2019).

This paper makes the argument that the two theories have more in common than what meets the eye. By integrating insights from the political psychology literature about voters' use of heuristics, it underscores how parties' policy commitments signal their favourability toward social groups to voters and how the latter may use parties' group appeals to infer their policy

commitments. In doing so, we aim to provide a theoretical framework that integrates both approaches into a general framework accounting for voters' affective evaluations of parties. The mechanism we present in this paper, which we call a "heuristic mechanism", thus has implications for understanding voters' (dis)affect toward both the in-party and out-parties.

Focusing on the case of Quebec, the paper presents an empirical test of the "heuristic mechanism". It first tests whether the contextual requirements for the heuristic mechanism to apply are present in the case of Quebec, i.e., partisan social sorting, ideological polarization, and awareness of such patterns among voters. The descriptive analysis provides evidence suggesting that our mechanism is likely to apply to the case of Quebec. The analysis then moves on to the results of a priming survey experiment that was conducted during the latest provincial election in the province. The experiment focuses on the Quebec conservative party (QCP), taking advantage of voters' likely lack of knowledge of the party's issue positions and group favourability given its newfound popularity during the 2022 provincial election. Respondents are either primed with the party's support for Bill 21 – a contentious law preventing many public sector employees from wearing visible religious symbols – or its favourability toward Quebec anglophones to test 1) whether voters infer group favourability from policy commitments and vice versa, and 2) whether such inferences influence their affective evaluations of parties.

In contrast to the prevalent approach in the affective polarization literature, we focus on affective evaluations of a single party rather than two or more parties. The main reason for doing so is to allow us to provide a more specific test of our heuristic mechanism. Given the study's sample size (n = 3,457) and the small effect sizes we expect, to maximize statistical power we limited our experiment to three conditions and held constant the party evaluated by voters. By doing so, we maximize our ability to causally identify small effect sizes.

While the literature has mostly operationalized affective polarization as a difference between in-party and out-party evaluations, this difference emerges from affective evaluations of individual parties, which this study focuses on – i.e., using feeling thermometer scores for each party as its outcome variable, without taking the difference between thermometer scores. The main issue that this operationalization overcomes is the issue of identifying the in-group and the out-group in a multiparty setting. Indeed, whereas the two-party nature of the American party system creates a natural distinction between the in-group and the out-group based on partisanship, multiparty systems do not provide such a natural boundary as multiple parties could theoretically be part of the in-group and the out-group. Further, studies on affective polarization in multiparty systems suggest that voters often split the landscape in two or more "camps" of parties that share similar ideological inclinations (Kekkonen and Ylä-Anttila, 2021; Reiljan and Ryan, 2021). Accordingly, using such operationalization that accounts for affective evaluations of all parties without making assumptions on how party "camps" are delineated is better suited to a multiparty system like Quebec's.

Using ordinary least squares analysis to estimate the average treatment effect on the treated (ATT), the analysis finds partial support for our expectations. We do not find evidence that respondents infer parties' policy commitments from their group appeals or that they infer their group favourability from their policy commitments. On the other hand, we find that respondents react to parties' group appeals by extrapolating beyond the groups appealed to and infer that favourability toward a group implies unfavourability toward a group that has competing interests. Turning to the impact of the heuristic mechanism on affective evaluations, the results do not suggest that voters infer policy commitments from group appeals and adjust their affective evaluations based on perceived policy proximity. The opposite mechanism does appear to have an

impact on affective evaluations, though, as our results suggest that voters may infer group favourability from policy commitments and adjust their affective evaluations based on perceived favourability. Although the mixed nature of our findings prevents us from reaching firm conclusions, we believe they nevertheless underscore the need for the literature on affective polarization to put front and center the entanglement of the two theoretical mechanisms to allow the field to make both theoretical and empirical progress.

2.1. Partisan affect: two inter-connected theories

The first theory that intends to account for affective polarization focuses on ideological polarization, with scholars claiming that the widening of the ideological distance between parties constitutes the main cause of growth of affective polarization (Algara & Zur, 2023; Lelkes, 2019; Rogowski & Sutherland, 2016; Webster & Abramowitz, 2017). As ideological differences between the parties become clearer, it also becomes easier for voters to identify the parties that best serve their interests and those that fail to do so (Lupu, 2015). Ideological polarization thus simplifies an otherwise complex political landscape (Somer & McCoy, 2018). As voters develop a clearer view of which parties support policies they like and which ones support disliked policies, the affective gap between them widens. Accordingly, ideological proximity between a voter and a party is claimed to be a critical factor influencing the former's affect toward the latter.

A second perspective rather focuses on social identities. Scholars taking this perspective claim that affective polarization is the result of social partisan sorting, where individuals who identify with different social groups tend to "sort" themselves into distinct parties. This perspective identifies the decline of cross-cutting identities, i.e., social groups that do not overwhelmingly

cluster within one of the parties, as a critical factor to explain the rise in affective polarization in the United States (Mason, 2015; 2016; Mason & Wronski, 2018). When social identities map continuously more cleanly onto partisan lines, partisan groups become increasingly socially homogenous. As a result of this sorting pattern, in-group bias and out-group prejudice toward social groups begin to permeate into citizens' affective evaluations of parties, based on the latter's favourability toward social groups (Iyengar et al., 2012; Mason, 2015; 2016), partly through the "echo chambers" partisans become immersed in, which strengthen their policy and affective polarization (Hobolt et al., 2024). The role of policy preferences is stated to be secondary in this mechanism, as they would only drive policy preferences by signalling partisan identities (Dias & Lelkes, 2021). This second perspective thus puts self-identities and group evaluations at the heart of the citizens' affect toward parties.

While the two perspectives have distinct theoretical roots, in practice, they are hard to disentangle (Orr et al., 2023). Indeed, group identities and policy preferences are so closely connected that it becomes hard for any study to isolate the effect of one from the other in a realistic fashion – i.e., with high external validity. Yet, we believe their interconnection allows voters to use each one as a heuristic to infer about the other. It is now common knowledge that the great majority of citizens lack time and interest to spend hours informing themselves about politics and thus find ways to "make do" with little political information (Delli Carpini & Keeter, 1996; Downs, 1957). Heuristics are thus commonly used by voters, who rely on pieces of information they acquire haphazardly to draw inferences about other topics.

Unfortunately, the literature's focus on isolating the influence of policy preferences from social identities – and vice versa – has so far prevented it from fully integrating insights on the use of heuristics and their application to affective evaluations of parties. A large body of research

shows that social identities signal policy preferences to voters (e.g., Brady & Sniderman, 1985; McDermott, 1998; Page & Shapiro, 1992). Accordingly, voters systematically associate social groups with some policies, such as women and support for the welfare state (Rosenwasser & Seale, 1988; Sanbonmatsu, 2002), LGBTQ+ groups and Blacks with liberal policies, and businesspeople and white people with conservative policies (Chambers et al., 2012). This interconnection is further reinforced by parties, that often combine group appeals with policy commitments (Horn et al., 2021).

We expect voters to use similar cognitive shortcuts when trying to assess a party's policy commitments. For a voter interested in evaluating their policy proximity with a party, the latter's favourability toward politically salient social groups that are strongly tied to some policies in voters' minds can thus serve as the basis for such extrapolation. Essentially, when parties express favourability toward certain groups, voters should infer that the party is committed to implementing the policies that the group is known to advocate for. Importantly, this extrapolation process is conditional on the voter perceiving the social group to be nearly homogenous in its support for a given set of policies. The more homogenous the group is perceived to be, the more potent is parties' favourability toward social group as a cue to infer their policy commitments.

This heuristic process is particularly consequential given that group appeals are commonplace in party politics, especially during electoral campaigns. By group appeals, we refer to parties' tendency to claim to speak for and behave in favour of specific social groups. Such appeals are not tied to any policy commitment and only constitute a pledge to better the fate of the groups parties appeal to (see Thau, 2018; 2019; 2021). The policy content of such appeals is left to the voter's imagination who may infer themselves how exactly the party plans to do so. Yet, when groups are strongly identified in voters' minds with a set of policies, we can expect voters

to infer similar policy commitments from parties' group appeals. Robison et al. (2021) find evidence of such inference in the American and Danish contexts, although the connection appears clearer for groups *not* appealed to. In sum, group appeals made by parties may provide important signals for voters to infer parties' policy commitments.

H1a: voters infer parties' policy commitments from their favourability toward social groups.

Importantly, the empirical expectations we derive from H1a vary based on voters' policy preferences. If a party appeals to a group whose policy preferences align with a voter's own policy preferences, the latter should perceive greater policy proximity to the party. In contrast, if a party appeals to a social group whose policy preferences diverge from the voter's own preferences, then the latter should react to the group appeal by lowering their perceived policy proximity with the party. Accordingly, if policy proximity with parties drives affective evaluations of the latter, obtaining information on parties' group favourability should allow voters to adjust their affective evaluations of parties via their updated policy proximity to them.

H1b: greater (lower) perceived proximity between a voter and a party – inferred via parties' group favourability – translates into warmer (colder) affect toward the party.

H1b also implies conditional empirical expectations. Learning about a party's favourability toward a social group, voters should infer that the party also endorses policies that are widely popular within the group. If they are themselves also supportive of such policies, they should feel

a greater policy proximity to the party and evaluate it more positively, with the opposite pattern among voters who do not support the policies they infer the party to endorse.

Although group identities have been claimed by some to be the main drivers of political behaviour (see Achen & Bartels, 2016), one can hardly think of ways for parties to enhance the social standing of groups that are totally devoid of policy implications. Actions that parties can take and that have the greatest impact on the social standing of groups are fundamentally policy-related, such as affirmative action policies or regulatory changes to restrict the renewal of temporary residence permits. Other group-supportive or group-adverse actions are less clearly policy-related from a governmental perspective, but might nevertheless entail internal party policies, such as the adoption of gender quotas for candidates or the refusal to do so. Consequently, even voters who mainly care about enhancing the status of their social groups must consider parties' policy commitments to identify parties' group favourability. Accordingly, learning about a party's policy commitments has the potential to alter what Mason and Wronski call "subjective sorting", i.e., the perceived alliances between social groups and parties (Mason & Wronski, 2018). This extrapolation – from policy commitments to group favourability – can also only happen when social groups are strongly tied in people's minds to some policies. Under such circumstances, voters can use a simple cognitive shortcut to classify parties as group-supportive and group-adverse based on their policy commitments.

H2a: voters infer parties' favourability toward social groups from their policy commitments.

Contrarily to H1a, the empirical expectations we can derive from H2a are not conditional and should evenly apply to all voters. Simply put, we expect that parties committing to policies

that are salient and widely endorsed within some social groups will be seen as more favourable to the latter groups across the whole electorate, regardless of their own policy preferences or group favourability. Importantly, for voters to be aware of social groups' stances, the policy needs to be salient and frequently discussed within the media to make groups' stances visible to most voters. The CAQ government's numerous reforms to strengthen the French language within Quebec fulfill such conditions, as they have been framed as attacks on the province's anglophone community (Caddell, 2024). They provide an example of salient policies being used to identify a group-adverse party among the electorate.

We also expect voters to extrapolate beyond the specific groups that parties appeal to and use such information to infer their favourability toward other groups. Essentially, in a context where social groups are well known to have conflicting policy preferences, voters could see group competition for policies as a zero-sum game and infer that expressing favourability toward a group implies unfavourability toward a group with conflicting policy preferences. Accordingly, group appeals could operate as a heuristic for voters to infer parties' favourability toward multiple groups, including some that parties do not even mention, based on voters' prior knowledge of the groups' policy preferences. Importantly, this insight would only apply to groups that are known among the population to cluster on different sides of a salient policy issue, with the most politically knowledgeable voters being most likely to react as expected.

H2b: voters infer that parties' group appeals signal unfavourability toward groups that have conflicting policy preferences with the groups being appealed to.

Finally, if parties' group favourability influence voters' affective evaluations of them, the inferential process whereby obtaining information on parties' policy commitments allows voters to update the latter's perceived group favourability should also influence their affective evaluations of them.

H2c: a party's (un)favourability toward groups (dis)liked by a voter – inferred through parties' policy commitments – translates into warmer (colder) affect toward the party.

Similarly to our previous hypothesis, we can also derive conditional empirical expectations from H2c. When exposed to a policy commitment made by a party, voters should infer that the party is also favourable to social groups advocating for the given policy. If they themselves are also favourable to the group, then they should have a more positive evaluation of the party, and vice versa for voters who are unfavourable to the group.

It is important to mention that our heuristic mechanism complements rather than substitutes the other forces that also shape voters' affect toward parties. Indeed, although policy commitments and group favourability are the focus of this paper, they remain only pieces of a much larger ensemble of political information that voters are exposed to. Most importantly, some other considerations have long-term influences – such as partisanship – that make their affective evaluations of parties likely to be relatively stable over time (Campbell et al., 1960). Yet, stable does not imply immutable, as voters' affective evaluations have also been shown to be influenced by short-term forces, with newly acquired pieces of information having a small but incremental impact on voters' affective evaluations (Lodge et al., 1995). Accordingly, we expect our heuristic

mechanism to operate in a similar fashion, i.e., to contribute to the set of short-term forces that can have a gradual effect on affective evaluations of parties without having a dramatic impact by itself.

We have so far said very little about partisan identification because our expectations regarding its potential interaction with our mechanism are unclear. Further, we also lack statistical power to test the impact of partisanship on our heuristic mechanism given the relatively small number of conservative partisans in our sample (n = 348) and the complex nature of our models which rely on three-way interactions. Yet, based on prior findings in the literature, we do not expect partisan identities to interfere profoundly with our heuristic mechanism. If anything, partisans may have more information about their parties and thus may rely less prominently on our mechanism to inform their affective evaluations of the group. Nevertheless, group favourability and policy commitments can certainly be expected to come into play even among partisans when affectively evaluating the in-party and out-parties, although information on parties' group favourability may be more challenging to gather in a multipart setting. The comparative literature on the topic remains scarce, but Harteveld finds that among Dutch partisans, those who "fit the socio-demographic 'profile' of their party better tend to be more affectively polarized." (Harteveld, 2021a: 1) Similarly, in the United States, Mason and Wronski (2018) find that parties' alignments with social groups conditions the in-party affective evaluations of their partisans. In other words, partisans feel warmer about the party they identify with when the latter forms alliances with – or, in our terminology, exhibits favourability toward – social groups that the partisan identifies with. Ideological cues have also been shown to influence affective evaluations of in-party candidates, albeit less strongly than out-party candidates (Lelkes, 2019).

In sum, we expect ideological proximity and group favourability to influence both in-party and out-party evaluations. Accordingly, granted that we assume that both partisans and non-

partisans look for cues to simplify their information-acquisition process, we should expect that our heuristic mechanism applies to both groups of voters, although independents may rely on it more prominently than partisans. The magnitude of this potential difference is a question that we leave for further research to investigate.

2.2. The Quebec context, cultural diversity and polarization

Empirical studies on affective polarization in the Canadian context are very few, but initial findings suggest that voters are becoming more ideologically consistent and are more strongly sorting themselves into parties on ideological grounds (Kevins & Soroka, 2018; Merkley, 2022). No studies on the topic have yet been conducted at the subnational level, but the Quebec political landscape provides a great opportunity to do so and test our empirical expectations. Issues related to diversity and discrimination have emerged as a new political cleavage in the province and fostered a great amount of polarization among both political parties and the electorate, with social groups clustering on different sides of the debate. Issues related to the recognition of systemic racism, indigenous claims for recognition, religious diversity and linguistic rights, among others, have become hot topics during the last few years and cleaved the political landscape in Quebec. Ethnocultural diversity has been a salient topic in the province since the mid-2000s (Gagnon and Larios, 2021), but it is only during the following decade that it blossomed into an emerging partisan cleavage. The 2012 election constituted a turning point, as parties began to adopt divergent positions on the issue of ethnocultural diversity and immigration (Xhardez and Paquet, 2021), which led to the issue taking root as a partisan cleavage structuring vote choice over the course of the decade (Bélanger and Godbout, 2022). The province's mainstream political parties now have

clearly distinct positions on the issue, as the governing Coalition avenir Québec (CAQ) and the Parti Québécois (PQ) have mostly been refractory to the demands of minority groups and pushed forward an approach to diversity that favours integration into the majority culture, whereas the Quebec Liberal Party (QLP) and Québec Solidaire (QS) rather favour a multiculturalist approach allowing greater expression of religious, cultural and linguistic diversity.

This emerging cleavage, that we will call the "multiculturalism" cleavage throughout this paper, relates mostly to voters' and parties' positions with regards to the trade-off between the protection of Quebec's distinct cultural identity (e.g., the French language, secularism as a societal value) and the rights of the provinces' minority groups (e.g., linguistic, religious, ethnic minorities). The two ends of this cleavage have been called "pluralism", which represents the position of those putting greater emphasis on the rights of minority groups, and "integration", which represents the position of those favouring the protection of Quebec's cultural identity (Bélanger and Godbout, 2022). Over the last decade, many political debates have revolved around this trade-off, as policies favouring the protection of Quebec's cultural identity often imply constraints on the rights and freedoms of its minority groups. This cleavage progressively evolved into a debate on who's interests are more worthy of protecting, as demands for the empowerment of minority groups – such demands for official recognition of systemic racism – have been met with resistance from nationalist groups often denying the claims made by minority groups while priming the need for their own grievances to be addressed. In contrast, minority groups themselves have criticized the impact on minority groups of reforms aimed at protecting Quebec's cultural identity (Rainville, 2020). The trade-off can be clearly illustrated by looking at the case of Quebec's anglophone population, which demands respect for its rights to have access to English public services and communications in an officially bilingual country, while Quebec nationalist

groups support constraints on such rights for the sake of protecting the province's linguistic identity.

This emerging cleavage is not only salient but also very polarizing within the electorate. Two bills that are keystones of the CAQ's first term in office (2018-2022), Bill 21 and Bill 96, are currently under judicial contestation and have resulted in numerous protests in the province's largest city, Montreal. Bill 21 prevents public employees in position of authority – mainly lawyers, judges, police officers and teachers – from wearing visible religious symbols during their working hours. It was adopted in 2019 and protests were still being organised nearly three years after its adoption to express opposition to the bill whose constitutionality is still currently being debated in front of the Courts (Pagano, 2022). Bill 96 focuses on the protection of the French language in the province, and establishes a series of measures to lead citizens, businesses, and mainly newcomers to learn and use French in the public sphere. It was made into law in 2021 and reforms the *Charter of the French Language* that was adopted in 1977. The bill's most contentious elements concern the establishment of a six-month deadline for newcomers to learn French, after which nearly all governmental communications will be made in French only, along with enrollment limitations in anglophone CEGEPs and constraints on the use of English by businesses. The bill is also currently being challenged in the courts, with parts of it having already been struck down (Lofaro, 2022).

While the new laws adopted by the government have been controversial, the government's refusal to grant the requests of minority groups have also been profoundly polarizing. The government's fierce refusal to formally acknowledge the existence of systemic racism in the province constitutes such a polarizing topic, that gathered a substantial amount of media coverage. Importantly, all the issues mentioned above form part of a common cleavage where parties systematically cluster in two non-overlapping groups that either favour an integrationist approach

to diversity in the province (CAQ and PQ, prioritizing the protection of the province's distinctive cultural identity) or rather support a multiculturalist approach (QLP and QS, prioritizing the rights of minorities).

Given the salience and polarizing nature of debates over the handling of diversity in the province, along with the clear positions of parties on the issue, we expect the multiculturalism cleavage in the province to be a very strong driver of affective polarization toward the parties. This expectation is backed by comparative research finding that cultural issues recently became the strongest policy dimension driving affective polarization, with economic issues found to be secondary to the latter (Harteveld, 2021b; Gidron et al., 2023). This finding is justified by the argument that social and cultural issues are profoundly symbolic in nature and tap into deeply held moral values, whereas economic issues are more pragmatic and harder for citizens to evaluate (Johnston and Wronski, 2015).

Strengthening the appeal of Quebec as a good testing ground for our mechanism is how the multiculturalism cleavage appears to map onto linguistic cleavages in the province. Indeed, the anglophone minority in Quebec has been prominent in its opposition to Bill 21, Bill 96 and general support of multiculturalist policies that embrace all forms of diversity in the province – including, but not limited to linguistic diversity. In contrast, the francophone majority has been much more supportive of the CAQ's reforms.[1] This linguistic cleavage in support for multiculturalism is not new, as anglo-Canadians have predominantly embraced the notion of multiculturalism from its very inception in Canadian society, while francophones in Quebec have always been refractory to it (McRoberts, 1997). The divide rose to prominence over the last two decades, as the issue became more salient in the Quebec political landscape, mainly in reaction to concerns in Quebec over the

[1] A survey conducted in January 2022 found 59% of French Quebecers to support banning visible religious symbols among teachers, whereas only 26% of English speaking Quebecers supported the idea.

influence of the province's growing cultural diversity on the majority culture (Bélanger and Godbout, 2022; Dalpé and Koussens, 2016; Dufresne et al., 2019). The province's two main linguistic groups have largely clustered on opposite sides of the debate, potentially reflecting anglophones' greater attachment to Canada and its official support of multiculturalism – along with their benefiting from multiculturalism themselves, as a minority within Quebec – and Quebec francophones' sense of cultural insecurity (Bilodeau et al., 2012; Turgeon and Bilodeau, 2014).

Importantly, this linguistic cleavage over support for multiculturalism creates the necessary connection between social groups and a salient political cleavage which allows our heuristic mechanism to operate. The analysis thus focuses on the connection between Quebec's two main linguistic groups and policy preferences over the issue of multiculturalism to test voters' use of our mechanism. While the analysis focuses on linguistic groups and policies that are not tied to linguistic identities, more so connected to preferences over multiculturalism, they relate to the same political cleavage within the province as preferences over linguistic and cultural diversity have historically correlated with linguistic identity in Quebec.

2.3. Data and Methods

The analysis presented in this chapter relies on an original survey that was fielded by the polling firm Léger during the 2022 Quebec provincial election. Relying on a rolling cross-sectional design, roughly 100 respondents were interviewed during every day of the campaign, with the daily samples designed to be representative of the broader population. The final sample size included 3,457 respondents, after removing from the sample respondents who were qualified as speeders (n = 42) or straight liners (n = 30), those who failed the attention check (n = 231), those

who did not complete the survey (n = 761) and those who were not of voting age (n = 15) or were not Canadian citizens (n = 112).[2] Compared to the overall population statistics for the year 2021 found on Statistics Canada, the final sample is slightly older (mean age = 48 years old (σ = 17), compared to 43 within the population), somewhat more educated (38% having a university degree, compared to 30% within the population[3]), appears representative linguistically (89% answering the survey in French)[4] and is exactly representative with regard to gender (50% of respondents identifying as women).

We justified focusing on Quebec by the growing polarization around the emerging cleavage of multiculturalism, that divides both the province's party system and its electorate into clearly separate groups on opposite sides of the issue. Social groups being sorted in different partisan groups and clustering on opposite sides of a salient political cleavage is a pre-requisite for our heuristic mechanism to apply. We consider this condition to be fulfilled with regards to linguistic groups' policy preferences on the issue of multiculturalism and their sorting into distinct partisan groups. To substantiate this claim, we first present descriptive evidence pertaining to 1) the extent to which partisan and linguistic groups are divided on the issue of multiculturalism, 2) affective polarization around the evaluation of social groups by partisan and linguistic groups, 3) partisan sorting of linguistic groups and 4) parties' perceived favourability toward each group. Looking into these four phenomena should allow us to evaluate the extent to which the

[2] Respondents are flagged as speeders when their answer time is more than two standard deviations away from the median completion time of the full sample. They are flagged as straight liners when they provide the same answer to 80% or more of the survey's matrix tables.

[3] This proportion is conservative as Statistics Canada only provides information on respondents between the ages of 25-64 who have a Bachelor's degree, leaving aside all citizens of 65+ years old who have such degree.

[4] It is harder to assess linguistic representativity, as respondents could only answer the survey in French or English, but Statistics Canada accounts for multiple languages in its statistics. The proportion of Quebecers having French as their first language is 77.5%, with 7.9% being allophones, i.e., having a language other than French or English as their first language. Assuming that roughly half of allophones chose to answer the survey in French, the sample would be only slightly overrepresentative of French-speaking citizens.

multiculturalism cleavage contributes to structure party competition in the province, whether linguistic groups cluster on opposite sides of the debate, and how potent the association is between linguistic groups and multiculturalism preferences in voters' minds.

The second stage of our analysis focuses on a survey experiment that provides an empirical test of our hypotheses. The experiment takes advantage of the emergence of the Quebec Conservative party (QCP), that came out of its traditional fringe party status and became a mainstream party before the 2022 provincial election. Although the party was a major actor during the 2022 election, most voters were likely to have an obscure understanding of the party's platform and its favourability toward social groups. Indeed, its prior history as a marginal party along with its focus during the campaign on dissatisfaction with the government's handling of the COVID-19 pandemic and conservative economic policies, positions which do not map onto the multiculturalism cleavage, provided little information to voters about the parties' stance toward multiculturalism and its group favourability. We thus primed a policy commitment (support for Bill 21) and a group appeal (favourability toward anglophones) that map onto the multiculturalism cleavage yet foster different implications. Indeed, the two primes – which are factual – should lead voters to perceive the party as unsupportive of multiculturalism and unfavourable toward anglophones (support for Bill 21 condition) or supportive of multiculturalism and favourable toward anglophones (support for anglophones condition). The contrasting implications to derive from our primes thus sets the table for a comprehensive test of our heuristic mechanism.

Given the study's focus on the issue of multiculturalism, we built a scale measuring respondents' attitudes on the matter. Four questions included in the survey potentially relate to the multiculturalism cleavage. The questions relate to the recognition of systemic racism, knowledge of French as a requirement for immigration, the wearing of visible religious symbols by public

sector employees, and affirmative action in the public sector. Exploratory factor analysis was conducted, and the results suggested that all four questions load well onto a common scale (results shown in Appendix A). The internal correlation of the four-item scale is acceptable ($\alpha = .66$) and produces an approximately normal distribution. Descriptive statistics of all variables used in the analysis are presented in Appendix B.

2.4. Results

2.4.1. Ideological polarization, social partisan sorting and affective polarization in Quebec

This first part of our results section focuses on measuring the extent of ideological polarization, social partisan sorting and affective polarization in the Quebec context. To do so, we begin by looking at ideological polarization, focusing on the issue of multiculturalism. Many salient and emotional social debates are connected to this cleavage and we therefore expect that if ideological polarization fosters affective polarization in the Quebec partisan landscape, it is mostly through the multiculturalism cleavage that such mechanism will operate, especially as it relates to Quebec francophones' collective anxiety over the threat of assimilation into the majority anglo-Canadian culture (Bélanger and Godbout, 2022: 45). In other words, if ideology is responsible for affective polarization in the province, it is likely that debates over multiculturalism in the province are the driving force in this process. Such expectation is also in line with recent studies finding cultural issues to be the strongest drivers of affective polarization in contemporary western world politics (Harteveld, 2021b; Gidron et al., 2023).

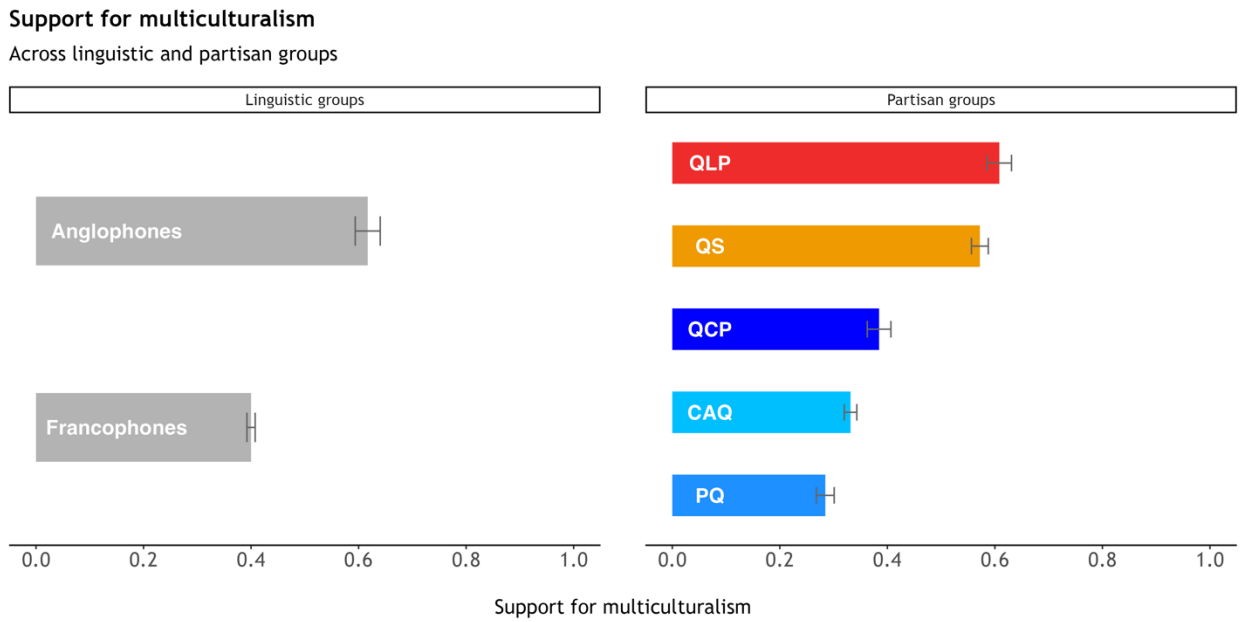

Figure 2.1*: social group's mean level of support for multiculturalism (on a 0-1 scale) with .05 confidence intervals. Full sample mean is .54.*

Figure 2.1 presents the difference between the mean position of partisan and linguistic groups on our multiculturalism scale. The scale runs from 0 to 1, with 1 expressing the highest level of support for multiculturalism. The figure shows clear evidence of ideological polarization on the issue, both among linguistic and partisan groups. Anglophones are found to be much more supportive of multiculturalism than Francophones, as respondents of the former group score on average .62 on a 0-1 scale measuring support for multiculturalism, whereas the latter group scores on average .4 on the same scale, a significant difference corresponding to .97 standard deviation. A similar polarization is found among partisan groups, as QS and QLP partisans both express very high levels of support for multiculturalism, whereas CAQ, PQ and QCP partisans cluster at the opposite end of the spectrum, expressing low levels of support for multiculturalism. Our results support those of others who claim that debates over cultural diversity are burgeoning into a new partisan cleavage in Quebec politics (Bélanger and Godbout, 2022). The patterns we find in terms of parties' position on the issue are similar to those of Bélanger and Godbout, although the

polarized nature of the partisan landscape appears clearer in our data, potentially due to our focus on the 2022 election (they investigated the period from 2012 to 2018, when the cleavage was still in its inception) and our use of a four-item scale, whereas their measure included only two items.

It is also important to mention that the multiculturalism cleavage structures party competition in a way which is distinct from other cleavages, as the two pro-multiculturalism parties – the QLP and QS – have opposite stances on the economic cleavage and the national question (Bélanger and Godbout, 2022). Similarly, the three parties that oppose multiculturalism present a varied set of economic preferences – the PQ lies at the center-left, the CAQ at the center-right and the QCP at the right – and preferences over the sovereignty – the PQ is pro-sovereignty, the CAQ is federalist, but nationalist, and the QCP is federalist without a strong nationalist agenda. Accordingly, parties' clustering on the issue of multiculturalism does not simply reflect common ideological leanings.

We now turn our focus toward social partisan sorting, that the literature presents as a two-way street: social groups' attitudes toward parties become polarized and partisans' attitudes toward them are similarly polarized. In other words, social groups that dislike a given party should also be disliked by the partisans of that party.

To investigate social partisan sorting, we first look at partisan and linguistic groups' feelings toward two social groups that can be clearly identified on opposite sides of the multiculturalism cleavage, i.e., nationalist Quebecers and anglophone Quebecers.[5] Figure 2.2 presents the mean attitude toward the two groups within each partisan and linguistic group. The results show a clear pattern of polarized attitudes toward social groups, which conforms to the

[5] We focus on "Nationalist Quebecers" rather than "Francophone Quebecers" because the former group is most strongly associated with opposition to multiculturalism, whereas the latter group is more heterogenous, with many francophone Quebecers also supporting multiculturalism.

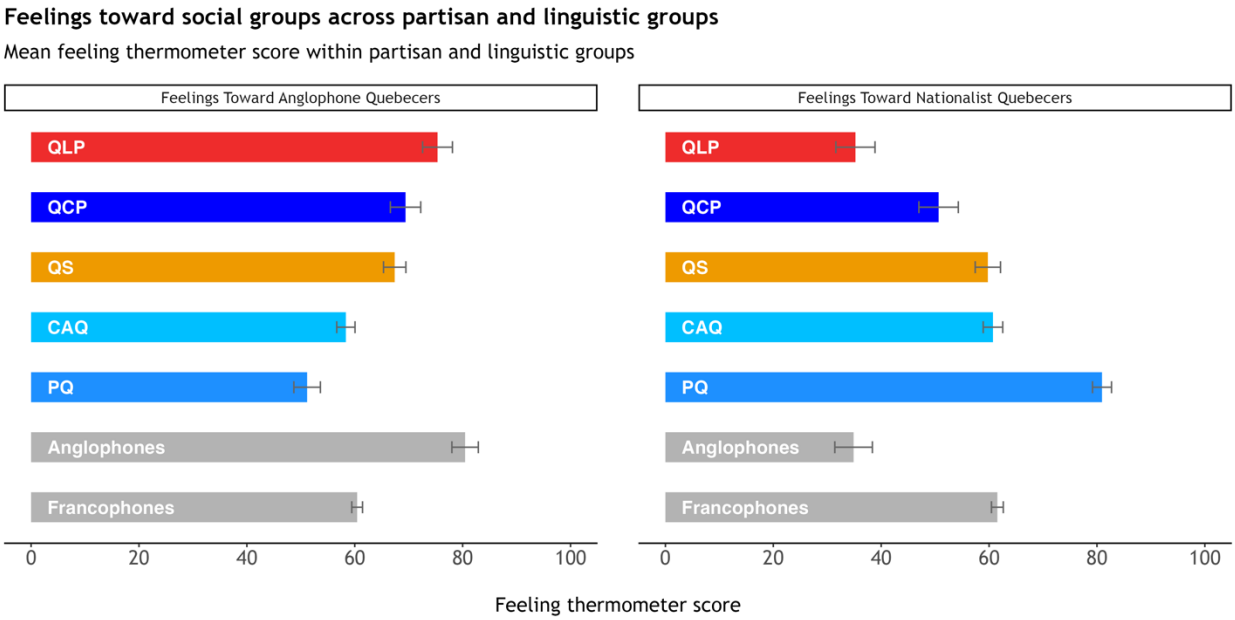

***Figure 2.2**: mean answers to the social group feeling thermometer scale (on a 0-100 scale) across partisan and linguistic groups, with .05 confidence intervals.*

expected pattern. CAQ and PQ partisans stand out as holding particularly negative attitudes toward anglophones, who lead the way in the opposition to the two parties' push for reforms aimed at putting boundaries on the expression of cultural diversity in the province. In contrast, partisans of the two parties – especially those of the PQ – are overwhelmingly positive toward nationalist Quebecers, a group that mostly opposes the multiculturalist agenda put forward by Quebec anglophones.

The pattern that we find for QLP supporters is exactly the opposite of that which we find for CAQ and PQ supporters. The Liberals express great favourability toward anglophones and are particularly negative toward nationalist Quebecers. Turning to QS partisans, they are relatively positive toward both anglophone and nationalist Quebecers, likely a reflection of its ambiguous position in support of both multiculturalism and Quebec nationalism.

Turning to linguistic groups, we also find clear evidence of polarization, as anglophones are generally warm toward their own linguistic group and cooler toward nationalist Quebecers.

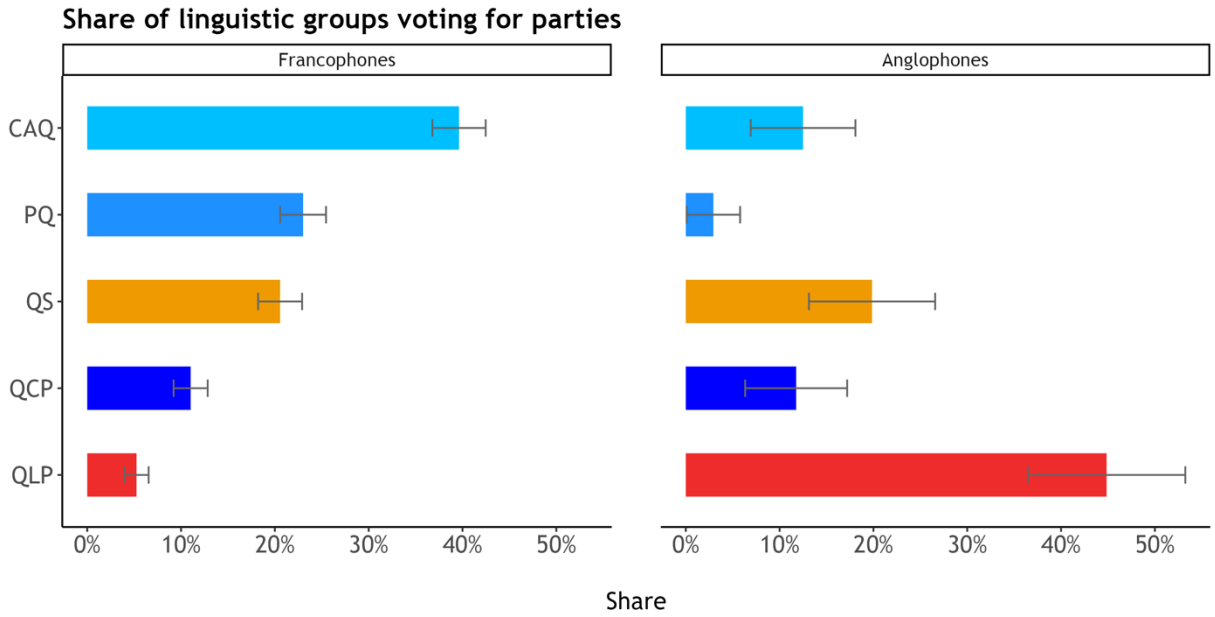

Figure 2.3*: share of linguistic groups voting for each party, with .05 confidence intervals.*

Francophones, who are over-represented among nationalist Quebecers, exhibit the opposite pattern, i.e., positive feelings toward the latter group and negative feelings toward anglophones.

Overall, the differences we find conform to our expected pattern as partisan and linguistic groups that support multiculturalism have positive attitudes toward anglophone Quebecers and cooler attitudes toward nationalist Quebecers, whereas the pattern is opposite among groups that oppose multiculturalism.

To assess social partisan sorting, we focus on its most fundamental expression, i.e., whether social groups cluster within specific parties when voting, once again focusing on linguistic groups. The proportions we present need to be interpreted as the share of respondents from each linguistic group who declare having voted for the party in the 2022 election. We expect linguistic groups' position on multiculturalism to be reflected in their vote choice.

The results presented in Figure 2.3 are supportive of our expectations. Francophones cluster in supporting parties opposed to multiculturalism, the CAQ and the PQ, whereas the two pro-multiculturalism parties, QS and the QLP, respectively occupy the third and fifth place in their

vote choice, with the QLP even doing worse than the QCP among francophones. A similar issue-consistent pattern is found among anglophones, with the two pro-multiculturalism parties now gathering the most vote shares within the group, while the CAQ and PQ trail behind both parties. Finally, the QCP does not appear to be significantly more popular among one of the two linguistic groups, which suggests that it is unlikely to be associated with either group in voters' minds.

As expected, Figure 2.3 shows that francophones and anglophones overwhelmingly support parties whose position on multiculturalism is consistent with the stance that predominates among their group. The evidence thus suggests that multiculturalism is an important political cleavage structuring electoral politics in the province, at least with regards to linguistic groups' voting choice given how their voting patterns map cleanly onto the cleavage.

Yet, for our heuristic mechanism to operate, voters need to be aware of parties' policy commitments and group favourability. Although we do not have direct measures of the policies that respondents ascribe to parties in our data, we consider it highly likely that voters are indeed aware of parties' contrasting policy preferences over the issue of multiculturalism given the ideological divide between partisan groups and the salience of the issue over the last decade. Turning to voters' awareness of parties' group favourability, we do have data to evaluate parties' perceived group favourability among our respondents. In our post-election survey, respondents were asked to mention any party that represents the interests of 1) nationalist Quebecers and 2) anglophone Quebecers. For each group, respondents could select more than one party (or none).

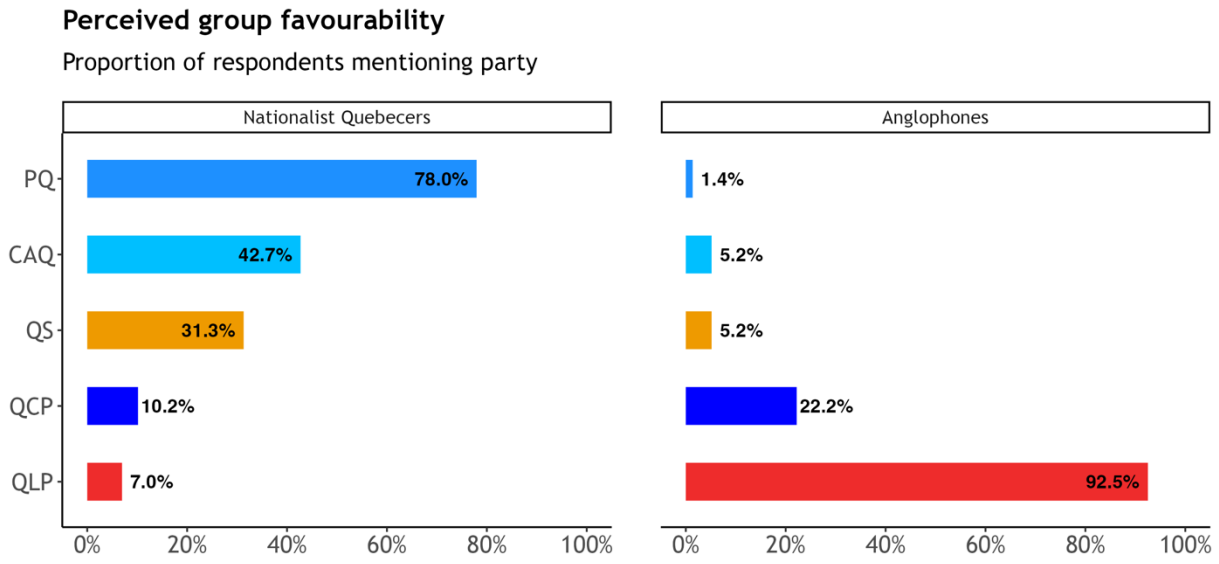

***Figure 2.4**: proportion of respondents identifying each party as representing the interests of nationalist Quebecers (on the left) and anglophones (on the right). Based on the answers of 1,218 respondents, who could pick more than one party for each group.*

Figure 2.4 shows the proportion of respondents mentioning that a party is favourable to nationalist Quebecers (left panel) and to anglophones (right panel). The results convincingly demonstrate that voters do perceive some parties as more favourable to some groups than others, as the PQ, the CAQ and to a lesser extent QS are perceived as favourable to nationalist Quebecers, whereas the QLP is overwhelmingly perceived as favourable to anglophone Quebecers, as respondents are nearly unanimous in identifying them as favourable to anglophones. These results are critical in suggesting the existence of a link in voters' minds between parties' policy commitments and perceived group favourability, which is a critical component of our heuristic mechanism. This striking result suggests that there is little uncertainty in voters' minds over the alliances that most parties form with linguistic groups in the province. Only the QCP's alliance with linguistic groups appears ambiguous to respondents. Although respondents were twice as likely to see the QCP as favourable to anglophones' rather francophones' interests, the proportion of respondents perceiving it to be aligned with anglophones remains substantially smaller than the

QLP. Accordingly, among all five parties, the QCP's alignment with linguistic groups appears most unclear to voters.

2.4.2. Experimentally manipulating the determinants of voters' affective evaluations

Having established that both the policy-driven and group-driven mechanisms can plausibly operate in the Quebec context, we now turn our focus to results of a priming experiment that was conducted to test our heuristic mechanism. Respondents were randomly assigned to one of three experimental conditions: a policy commitment prime, a group favourability prime and a control condition. The experiment focuses on a single party, the QCP. The QCP was selected as the target of the experiment because of its newfound popularity. During the weeks prior to the beginning of the election, the party gathered around 12% of voting intentions, was well on its way to present a full slate of candidates for the first time in its history and received much media coverage as its electoral base, mainly built around dissatisfaction with the incumbent government's handling of the COVID-19 pandemic, was strongly mobilized. This momentum that the party enjoyed was in stark contrast to its prior history as a fringe party that never gathered more than 1.5% of the popular vote and never even remotely came close to having a candidate elected since its inception in 2009. Importantly, this newfound popularity created an opportunity that we sought to exploit. Indeed, our experiment relies on the assumption that information which is not primed to respondents – about parties' policy commitments or group favourability – is unlikely to be considered when answering the subsequent questions. This assumption is unrealistic for the four major parties, as the relative stability of Quebec's party system makes respondents likely to have at least a basic knowledge of the parties' platforms and their favourability toward social groups. In contrast, the

QCP's emergence as a major player in the Quebec partisan landscape creates a situation where most voters are likely to be ill-informed about a party that used to be a fringe party. Figures 2.3 and 2.4 support this expectation, as they both suggest that the party's alignment with linguistic groups in the province was unclear to voters during the campaign. Further, although its "conservative" label might constitute a heuristic to infer about its platform, it is likely to be of little use to voters as the party is not affiliated with the federal Conservative party. Social conservatism also does not constitute a political cleavage in Quebec (Bélanger and Godbout, 2022) and was not a significant part of the party's program, that was more focused on individual liberties and economic conservatism. The party's conservative label thus had only a moderate heuristic value to voters, especially when it comes to inferring the party's alignment with social groups and its position on multiculturalism.

Respondents were randomly assigned to one of three experimental conditions. A first group was primed with the party's support for Bill 21, a law that prevents public employees in position of authority – mainly lawyers, judges, police officers and teachers – from wearing visible religious symbols during their working hours. Although political debates around the bill received much media coverage, the party's position did not receive such extensive coverage and it also clashed with its leader being a well-known libertarian media pundit who spent the last decade advocating for greater individual rights and freedoms in the province. Accordingly, given that its leader was much better known among the public than his party, and given that his libertarian values contrasts with the party's support of a bill which imposes constraints on religious freedoms, his party's support for Bill 21 was counter-intuitive and we thus expect pre-experiment levels of awareness of the party's position on the issue to be low.

The second treatment condition underscored the party's staunch defense of Quebec anglophones, providing a short quote from its leader to substantiate the claim. Anglophones in Quebec have typically been associated with a multiculturalist vision of Quebec and have been very critical of Bill 21. Again, based on the party's history as a fringe party, we expect pre-experiment levels of knowledge of the party's favourability toward anglophones to be very low. Finally, respondents could also be assigned to a control condition where no information about the QCP was provided to them.

The policy commitment and group appeal that are primed are both factual. Indeed, support for Bill 21 was part of the party's electoral platform, whereas the quote provided in the group appeal condition was taken from an interview given by the QCP's leader in the days before the election. Interestingly, these two positions are conflicting, as the party's support for Bill 21 expresses opposition to multiculturalism, whereas its appeal to anglophones expresses favourability toward a group that has historically been a staunch defender and major benefiter of multiculturalism in the province. Accordingly, respondents should react in opposite ways to our two primes, which would enhance our ability to identify a treatment effect.

The block of questions used in our analysis included a prompt common to all respondents: "Please answer the following questions pertaining to the Quebec Conservative Party and its leader". For respondents assigned to one of the two treatment conditions, a supplemental prime was included before the prompt. Respondents assigned to the group favourability condition received the following prime: "The Conservative Party leader systematically defended Quebec anglophones in recent months, claiming shortly before the beginning of the campaign that 'Anglos are our allies who want to make Quebec a better place to live.'" Respondents assigned to the policy commitment condition received the following prime: "The Conservative Party is supportive of Bill

21, which prevents public sector employees in positions of authority from wearing visible religious symbols." Three questions were then asked after the prompt. A first question asks respondents to what extent the QCP represents their political preferences, on a 5-point scale. This question is used to measure respondents' perceived policy proximity with the QCP. A second question asks respondents to what extent they believe that a QCP government would contribute to or harm the social empowerment of 1) francophone Quebecers and 2) anglophone Quebecers.[6] This question is used to measure respondents' perception of the QCP's group favourability. Finally, a third question asks them to provide a feeling thermometer score for the QCP and is used as our measure of affective evaluations of the party.

The analysis tests separately each of our four sub-hypotheses. To test H1a, we investigate whether respondents who were primed with the QCP's support for anglophones adjust their perceived policy proximity with the party consistently with their position on the issue of multiculturalism. We also look at the impact of the prime on their affective evaluations of the QCP to test H1b. To test H2a, we investigate whether policy commitments influence the QCP's perceived group favourability. For H2b, we look at the impact of the "support for anglophones" prime on the party's perceived favourability toward francophones. Finally, to test H2c, we look at the effect of the policy commitment prime, in this case whether the QCP's support for Bill 21 decreases (increases) its affective evaluations among respondents who like (dislike) anglophones.

H1a, H2a and H2b are all tested using an identical OLS model, changing only the outcome variable that is predicted. The conditional average treatment effect on the treated (CATT) for these

[6] Two other social groups were also included in the question: visible minorities and indigenous peoples. Answer to these two subquestions are not used in the analysis.

three hypotheses is estimated by looking at the marginal effect of the treatment conditions using the following model:

$$y_i = \mathbf{D_i}\boldsymbol{\tau} + \beta m + \boldsymbol{\delta}\mathbf{D_i}m_i + \mathbf{X_i}\boldsymbol{\lambda} + \alpha + \varepsilon_i$$

for respondent $i = 1, \ldots, n$, where $\mathbf{D_i}$ is a vector of dummy indicators capturing respondents' experimental condition, m_i captures respondents' support for multiculturalism, with both indicators being interacted together as $\mathbf{D_i}m_i$. $\mathbf{X_i}$ is a vector of sociodemographic controls identified as correlated with the experimental condition, α is an intercept and ε_i is an idiosyncratic error term. Considering that H1b does not posit a conditional treatment effect, we simply estimate the average treatment effect on the treated (ATT) as:

$$y_i = \mathbf{D_i}\boldsymbol{\tau} + \mathbf{X_i}\boldsymbol{\lambda} + \alpha + \varepsilon_i.$$

Given recent concerns expressed over covariate adjustment in regression estimates of treatment effects playing a role in the replicability crisis (Mutz et al., 2019, on the replicability crisis see Ioannidis, 2005), we present results without correcting for covariate imbalances (which are very few, as shown in Appendix C). Yet, in Appendix D we present the results of an analysis that uses propensity score matching with covariate adjustment to adjust imbalanced covariates all the while lessening the model dependence of our results (Ho et al., 2007). As an additional robustness test, we also present our main models using a binned version of the conditioning variables instead of their original version to test for potential nonlinear interactions (see Hainmueller et al., 2019), with the results shown in Appendix E. The interpretation of all sets of results is substantively identical.

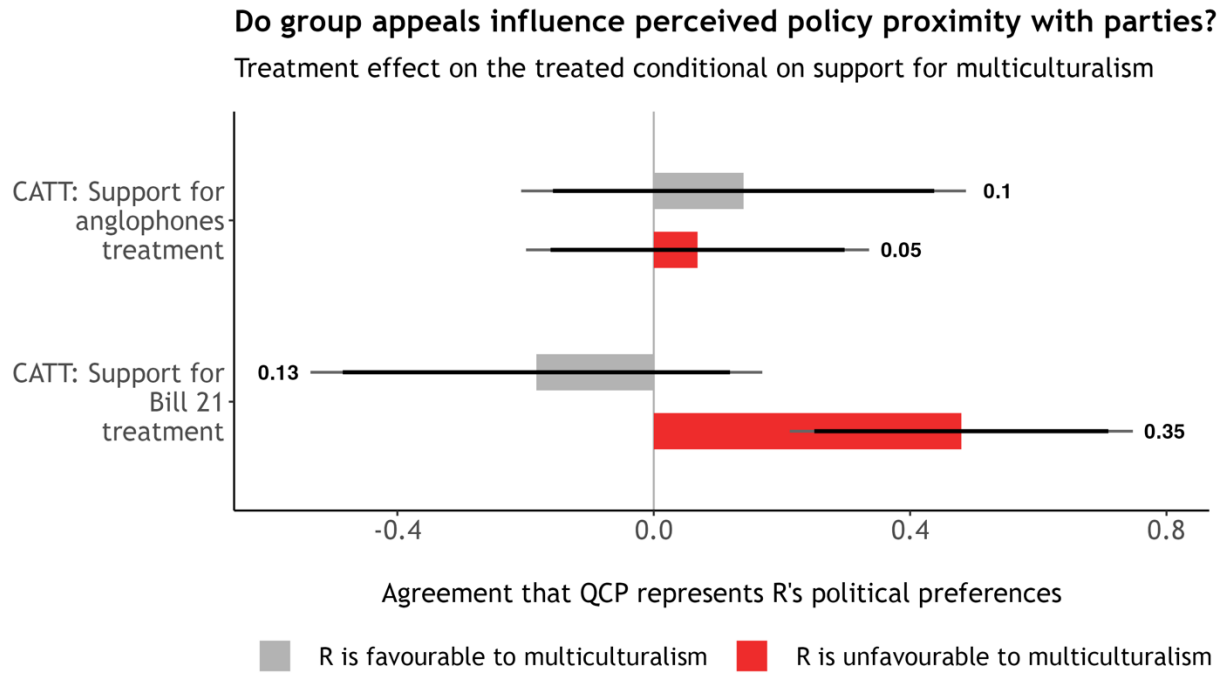

***Figure 2.5**: conditional average treatment effects on the treated (CATT), with position toward multiculturalism moderating the treatment effect. Horizontal bars represent .05 confidence intervals (grey) and .1 confidence intervals (black). Numbers besides the confidence intervals represent effect sizes expressed in terms of standard deviations of the outcome variable.*

Figure 2.5 presents the results of our empirical test of H1a. All our hypotheses relate to only one of our two treatment effect estimates, either the policy or the group appeal prime. Yet, we nevertheless always plot both treatment effects for transparency but always put the treatment effects of interest at the top of the plots. So, for example, Figure 2.5 shows the impact of each treatment condition (listed on the y-axis) on respondents that are favourable to multiculturalism (grey bars) and those that are unfavourable to multiculturalism (red bars). To evaluate the substantive significance of our treatment effect estimates, we express their value in terms of standard deviations of the outcome variable besides the confidence intervals, with the horizontal bars representing the raw point estimates. To further simplify the presentation of the results, we compare the treatment effect among respondents who score the minimum value of the

multiculturalism scale (red bars) and those who score the maximum value (grey bars).[7] Positive values indicate that the treatment made respondents feel like the QCP represents their interests more than their counterparts in the control condition, whereas negative values imply that the treatment made respondents feel like the QCP represents their interests less than respondents in the control group.

Given the conditional nature of the empirical expectations we derive from H1a, to find support for it, the "support for anglophones" treatment should have a positive effect on perceived policy proximity among respondents who support multiculturalism and a negative effect among respondents opposed to multiculturalism. Unfortunately, both treatment effects fall short of conventional levels of statistical significance, with their point estimates lying close to zero. One of the two estimates – that of respondents who support multiculturalism – points in the expected direction, although the substantive size of the effect remains small. Our group favourability treatment may thus be too weak to induce substantial changes in perceived policy proximity, as the clearer – and potentially more polarizing – "support for Bill 21" treatment does yield a significant increase in perceived policy proximity among respondents opposed to multiculturalism and a smaller effect that nevertheless points in the expected direction for those supportive of multiculturalism. The strength of the effect of the "support for Bill 21" prime substantiates the argument made earlier that Bill 21 constitutes a flagship of the salient political cleavage over multiculturalism within the province.

We now turn to our test of H2a and H2b. To find support for H2a, respondents who are exposed to the "support for Bill 21" treatment should perceive the QCP as less likely to enhance

[7] Plots showing linear effects using the full range of the scale of the moderators can be found in Appendix F.

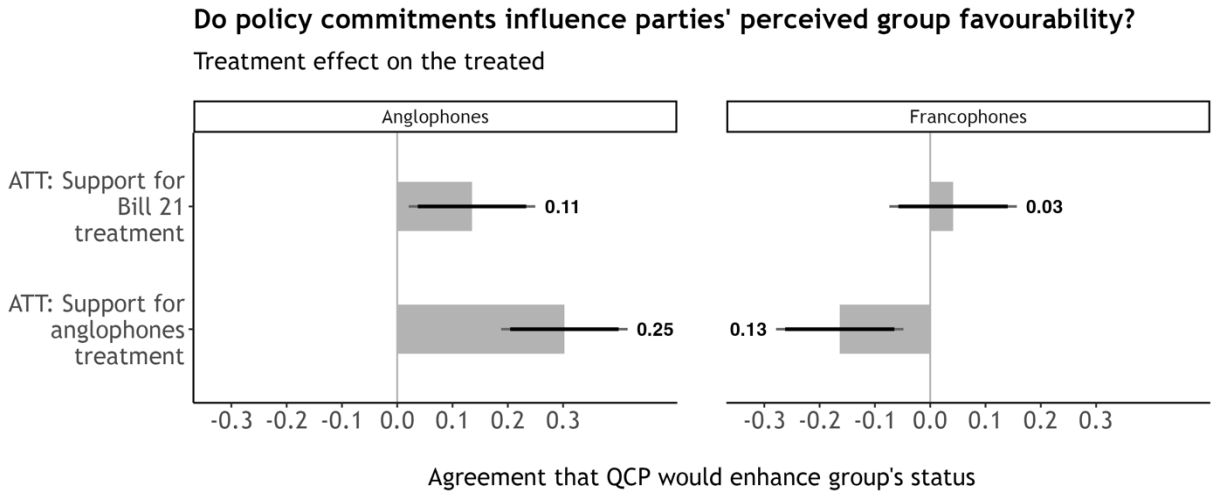

Figure 2.6*: average treatment effect on the treated (ATT), for each target group. Horizontal bars represent .05 confidence intervals (grey) and .1 confidence intervals (black). Numbers besides the confidence intervals represent effect sizes expressed in terms of standard deviations of the outcome variable.*

anglophones' social status and more likely to enhance that of francophones. Looking at the results presented in Figure 2.6, we fail to find evidence that respondents used the policy commitment as a signal for group favourability, as the treatment effect runs in the opposite direction for perceived impact on anglophones (left panel), while the treatment effect for the QCP's impact on francophones points in the expected direction but falls short of conventional levels of statistical significance.

Moving to the second experimental condition, to find support for H2b, respondents who are exposed to the "support for anglophones" treatment should perceive the QCP as more likely to enhance anglophones' social status and less likely to enhance francophones' social status. The results are supportive of our expectations, as both effects are in the expected direction, which suggests that respondents inferred that if the party is favourable to anglophones, it must also be unfavourable to francophones, whose policy preferences are in many regards orthogonal to those of anglophones. This is important evidence in favour of our heuristic mechanism, as although the prime only mentioned the party's support for anglophones without mentioning francophones, respondents inferred that supporting anglophones necessarily runs against the interest of

francophones. Importantly, such inference was more straightforward to derive than the previous one linking Bill 21 to linguistic groups. The latter inference potentially required a significant amount of political knowledge, with many respondents likely failing to reach this threshold.

We now turn to analyzing whether our heuristic mechanism influences respondents' affective evaluations of the QCP, testing H1b and H2c. We expect that voters will infer policy commitments from parties' group appeals. Upon learning that a party appeals to a certain group, voters should infer that the party is committed to implementing the policies that groups advocate for and adjust their affective evaluations of the party according to the congruence between their policy preferences and the policy commitments they ascribe to the party. We also expect that voters infer parties' group favourability from their policy commitments. Accordingly, upon learning that a party supports a given policy position, voters should extrapolate that the party is also favourable to groups advocating for such policy and adjust their affective evaluations of the party based on their own feelings toward the groups.

Two sets of models test these expectations. The first one tests whether pro-multiculturalism (anti-multiculturalism) respondents' affective evaluations of the QCP increase (decrease) when primed with its favourability toward anglophones. Finding that respondents do so would provide evidence suggesting that they react to the group appeal by inferring that the QCP is supportive of multiculturalism and adjust their affective evaluations of the party in accordance with their updated perceived policy proximity with the party. The second set of models tests whether the affective evaluations of the QCP among respondents favourable (unfavourable) to Quebec anglophones decrease (increase) when primed with the party's support for Bill 21. Finding that respondents react as such would suggest that they reacted to the policy commitment by updating the QCP's

perceived favourability toward anglophones and adjusting their affective evaluations of the party consistently with their own attitude toward the group.

We use QCP feeling thermometer scores to analyze affective evaluations and operationalize the outcome variable in two different ways given that QCP feeling thermometer scores were asked twice during the survey.[8] The first operationalization uses post-experiment QCP feeling thermometer scores as the outcome variable, whereas the second operationalization consists of the within-respondent difference between the pre-experiment and post-experiment QCP feeling thermometer scores. Results for both operationalizations are presented.

We first look at whether voters use such heuristic process and adjust their evaluations according to their policy preferences, once again focusing on attitudes toward multiculturalism. Figure 2.7 presents the results of our test of H1b and provide little direct evidence supporting our heuristic mechanism. All treatment effects for the "support for anglophones" prime fall short of conventional levels of statistical significance, with both effects in the left panel even pointing opposite their expected direction. Effects in the right panel point in the expected direction, but fall considerably short of conventional levels of statistical significance. A potential reason for the inconclusiveness of the group prime results lies in the vignette referring to the QCP party leader, Éric Duhaime, whereas the two other vignettes do not mention his name. There is therefore a possibility for the group prime to be contaminated by opinions toward the party leader, especially considering the mild nature of the statement expressing group favourability.

[8] Feeling thermometer scores for all parties were registered at the beginning of the survey. The QCP feeling thermometer question was then asked again after the experimental manipulation, toward the end of the survey. If any bias may arise from asking the same question twice, we expect that it would be a consistency bias, whereby respondents may be influenced by their prior answer to offer a second answer that is consistent with their previous answer, which would make our estimated treatment effects more conservative.

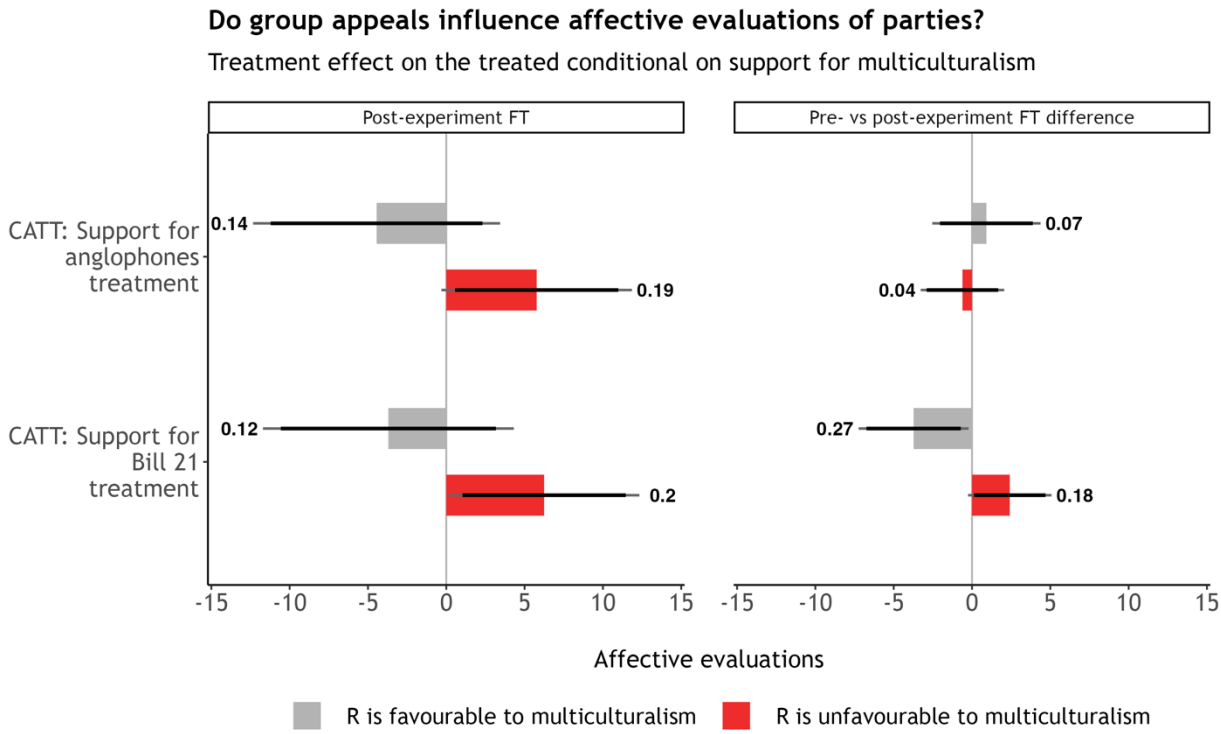

Figure 2.7*: conditional average treatment effects on the treated (CATT), with support for multiculturalism moderating the treatment effect. Horizontal bars represent .05 confidence intervals (grey) and .1 confidence intervals (black). Numbers besides the confidence intervals represent effect sizes expressed in terms of standard deviations of the outcome variable.*

Looking at the policy prime (support for Bill 21), all treatment effects are in the expected direction this time, with two of them even reaching statistical significance at the $p<.05$ level and a third reaching the $p<.1$ threshold, suggesting that the Bill 21 prime influences respondents' affective evaluations of the QCP in accordance with their own position on multiculturalism. This is evidence in favour of the policy-driven mechanism, but does not support our heuristic mechanism per se.

We turn to the final test of our heuristic mechanism, looking at the effect of the "support for Bill 21" prime on respondents' affective evaluations (H2c). We expect respondents to react to

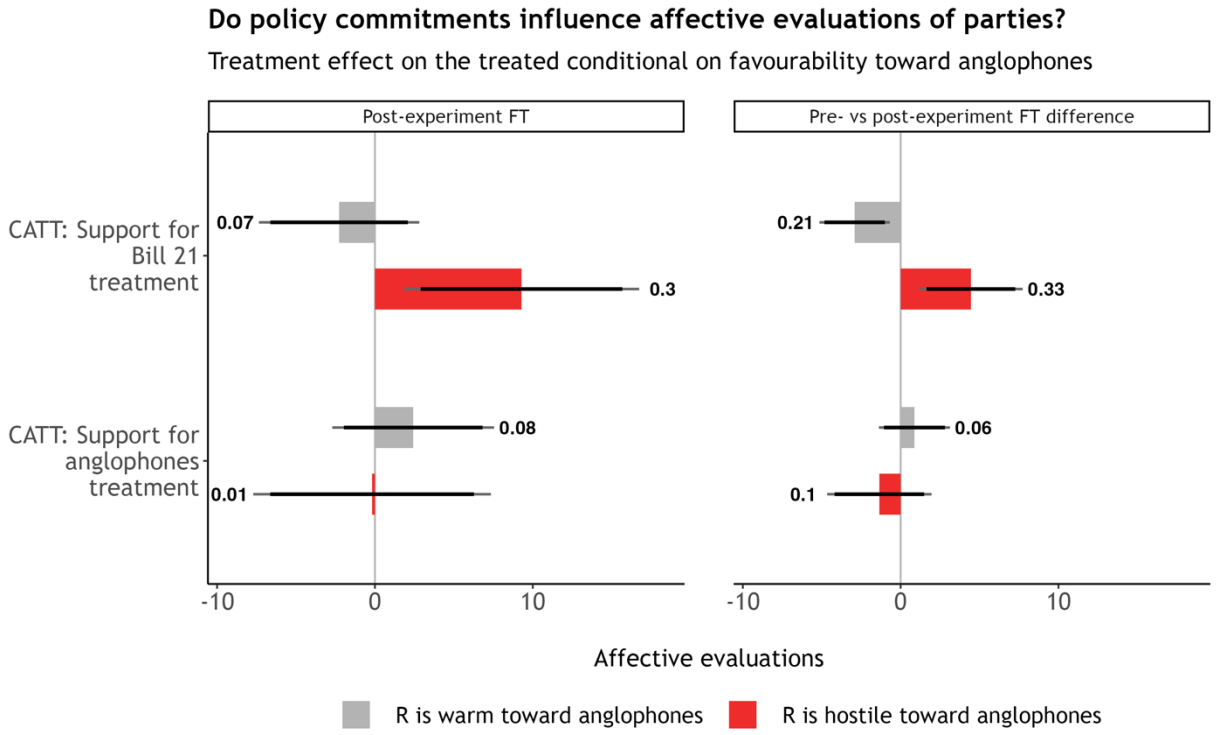

Figure 2.8*: conditional average treatment effects on the treated (CATT), with favourability toward Quebec anglophones moderating the treatment effect. Horizontal bars represent .05 confidence intervals (grey) and .1 confidence intervals (black). Numbers besides the confidence intervals represent effect sizes expressed in terms of standard deviations of the outcome variable.*

express colder (warmer) evaluations of the QCP when exposed to the policy prime. Since anglophones are tied to multiculturalist policies in the Quebec political landscape, respondents should infer that the QCP is favourable to them if it expresses support for the group, which would lead them to adjust their affective evaluations of the party in light of their own attitudes toward the group. Importantly, we do not posit that opposition to multiculturalism in Quebec necessarily implies hostility toward the anglophone community, but simply that parties' policy commitments on the issue allow voters to infer their favourability toward the group.

Attitudes toward anglophones were measured before the experiment as feeling thermometer scores and are used as the conditioning variable moderating the treatment effect. We compare the treatment effects among respondents expressing the greatest hostility toward anglophones (i.e., a 0/100 feeling thermometer score, red bars) to those expressing the warmest

attitudes toward them (i.e., a 100/100 feeling thermometer score, grey bars). Results are presented in Figure 2.8 and provide general support for our expectations. All four treatment effects for the policy prime point in the expected direction, with three of the four treatment effects reaching conventional levels of statistical significance despite their small effect sizes. The results suggest that respondents who were exposed to the "support for Bill 21" inferred that the party is unfavourable to anglophones and adjusted their affective evaluations of the party upward for those who dislike Quebec anglophones and downward for those who like Quebec anglophones. The four treatment effects for the group prime are all in the expected direction but fall short of reaching conventional levels of statistical significance. The latter result suggests that our group prime may unfortunately be too weak to yield conclusive results, which provides some nuance to the null findings for the previous tests of our mechanism.

2.5. Discussion

The analysis presented above constitutes a deep dive into the nature of affective polarization and affect toward parties in the province of Quebec. Looking first at descriptive statistics, we find clear evidence of a political cleavage that we conceptualize as a debate over multiculturalism. We argue in this paper that the province's two main linguistic groups are widely known to cluster on different sides of the debate, which allows linguistic identities to signal preferences on multiculturalism, while the latter signals attitudes toward linguistic groups.

The results support our interpretation of polarization in Quebec. Linguistic and partisan groups have different preferences over multiculturalism, they also have polarized attitudes of social groups associated with support or opposition to multiculturalism and have similarly

polarized attitudes toward linguistic groups. Finally, both linguistic groups cluster in different parties, in a way which reflects their position on multiculturalism, and parties' favourability toward the groups are well known among the electorate.

Having established the magnitude of ideological polarization and social partisan sorting in the province, we moved to a formal test of our heuristic mechanism via a priming survey experiment. The results provide partial support for our expectations. We did not find evidence suggesting that group appeals influence perceived policy proximity with parties and also failed to find evidence that parties' policy commitments influence their perceived group favourability. In contrast, we do find evidence suggesting that voters exposed to a group appeal extrapolate beyond the group appealed to and assume that expressing favourability for the group implies challenging the interests of groups that have competing interests. This result is likely tied to the tenuous link between Quebec's linguistic groups and debates around multiculturalism in the province. While there exists a connection between them, it is likely that a significant amount of political knowledge was required to draw the connection, hence alleviating our treatment effects. Using social groups and political issues that are more overtly tied together would potentially provide a more likely case to find support for our expectations. Accordingly, while our theorization states that voters can draw links between political issue stances and social groups, it remains important not to overstate this ability and underscore that it likely only applies to salient groups and issues.

Moving to an analysis of our heuristic mechanism's impact on affective evaluations of parties, the results are again mixed. We fail to find evidence suggesting that voters infer policy commitments from group appeals and adjust their affective evaluations based on perceived policy proximity. We do find convincing evidence, though, that voters infer group favourability from

policy commitments and adjust their affective evaluations of parties consistently with their own group favourability.

Taken together, these results provide partial support for our heuristic mechanism. We find some indications that voters look for cues to simplify the political landscape and consider group favourability and policy commitments as signals for one another, but the evidence only provides qualified support to our empirical expectations. These mixed findings partly have to do with our mechanism being related to short-term factors that are known to have a small effect on political attitudes. Given that we expected small effect sizes, statistical power is an important limitation. Finding that most of our treatment effects go in the expected direction, even when failing to reach conventional levels of statistical significance, provides some reassurance that more powerful empirical tests could potentially reach conclusive results.

Yet, some limitations of our experiment could also potentially explain the mixed findings that we obtain. Importantly, affective evaluations of the QCP were extremely low across the board, potentially due to the party's very critical position on public health measures related to the COVID-19 pandemic that were perceived as very controversial among the province's population. Given the party's focus on the issue during the months leading to the election, there is a possibility that voters perceived it as the party of a single issue – i.e., opposition to public health measures – and discarded any additional information about it. Its low scores on our pre-experiment feeling thermometer measure also raise a concern about a potential floor effect, as attitudes toward it are so low before the experiment that finding a negative treatment effect on affective evaluations of the party is very statistically demanding. Finally, linguistic group identities are unlikely to be as salient as other social identity markers, such as race, ethnicity and gender, which may contribute to our mixed findings. Accordingly, future studies designed to assess similar research questions

should focus on salient groups and issues, preferably some toward which average opinions are neither too high nor too low (to alleviate the risk of a floor and ceiling effect) and experiments should be built with the explicit purpose of maximizing statistical power considering small effect sizes to be expected.

This study makes a theoretical contribution by putting front and center the potential entanglement of the two causal mechanisms that have been developed to account for affective polarization, thus adding to a very recent line of theoretical refinement (Orr et al., 2023). While the results of our experiment are not systematically supportive of our expectations, we believe enough evidence is found to warrant further investigations of the entanglement of both causal mechanisms. We thus encourage others to build upon the theoretical and empirical contributions of this paper by testing the heuristic mechanism that we detailed in other contexts. Further, this study focused on the impact of the heuristic mechanism on affect toward a single party. We encourage others to build on this study by focusing on its impact on affective polarization, i.e., affect toward multiple parties.

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2.7. Appendix

Appendix A: Factor analysis

Variable	Factor Loadings
The provincial government should acknowledge systemic racism	0.648
All employees of the public sector in Quebec should be allowed to wear visible religious symbols	0.684
Minority groups should be hired preferentially in the public sector	0.537
Speaking French should be a requirement for immigration to Quebec	0.425

Scale's Cronbach alpha: 0.66

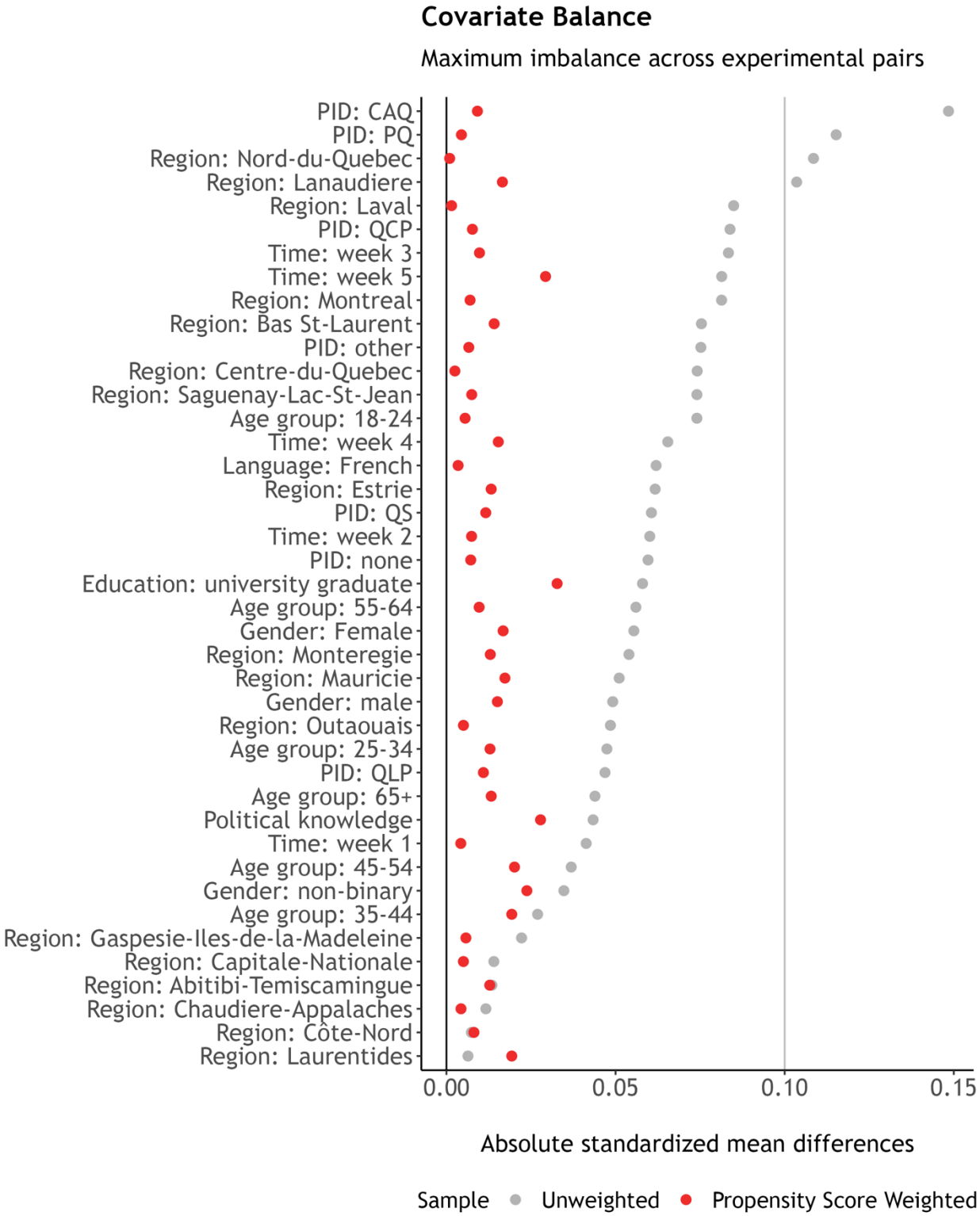
Appendix B: Descriptive statistics

Variable	Min.	Mean	Median	Max.	Std. Dev.
Experimental condition: control	0	0.34	0	1	0.47
Experimental condition: support for anglophones	0	0.32	0	1	0.47
Experimental condition: support for Bill 21	0	0.33	0	1	0.47
Feeling thermometer: QCP	0	23.8	6	100	31.61
Post-experiment feelinf thermometer: QCP	0	25.15	10	100	30.58
Feeling thermometer: CAQ	0	53.68	60	100	33.94
Feeling thermometer: QLP	0	31.69	26	100	28.19
Feeling thermometer: QS	0	44.72	50	100	33.11
Feeling thermometer: PQ	0	46.35	50	100	31.67
Feeling thermometer: Nationalist Quebecers	0	58.39	60	100	29.91
Feeling thermometer: Anglophone Quebecers	0	62.19	62	100	26.32
Multiculturalism scale	0	0.42	0.44	1	0.22
Government should acknowledge systemic racism	1	3.54	4	5	1.32
Public sector employees should be allowed to wear religious symbols	1	2.58	2	5	1.4
Minority groups should be hired preferentially in the public sector	1	2.47	3	5	1.11
Government should address social and economic inequalities	1	4.12	4	5	0.97
French should be a requirement for immigration to Quebec	1	3.78	4	5	1.25
QCP well represents my political preferences	1	2.11	1	5	1.36
QCP government would enhance the social status of francophones	1	2.62	3	5	1.23
QCP government would enhance the social status of anglophones	1	2.99	3	5	1.22
Mention of CAQ as favourable to nationalist Quebecers	0	0.43	0	1	0.49
Mention of PQ as favourable to nationalist Quebecers	0	0.78	1	1	0.41
Mention of QCP as favourable to nationalist Quebecers	0	0.1	0	1	0.3
Mention of QLP as favourable to nationalist Quebecers	0	0.07	0	1	0.25
Mention of QS as favourable to nationalist Quebecers	0	0.31	0	1	0.46
Mention of CAQ as favourable to anglophone Quebecers	0	0.05	0	1	0.22
Mention of PQ as favourable to anglophone Quebecers	0	0.01	0	1	0.12
Mention of QCP as favourable to anglophone Quebecers	0	0.22	0	1	0.42
Mention of QLP as favourable to anglophone Quebecers	0	0.93	1	1	0.26
Mention of QS as favourable to anglophone Quebecers	0	0.05	0	1	0.22
Answered survey in French	0	0.89	1	1	0.31
Age group: 18-24	0	0.1	0	1	0.3
Age group: 25-34	0	0.18	0	1	0.38
Age group: 35-44	0	0.17	0	1	0.38

Variable	Min.	Mean	Median	Max.	Std. Dev.
Age group: 45-54	0	0.18	0	1	0.38
Age group: 55-64	0	0.17	0	1	0.38
Age group: 65+	0	0.2	0	1	0.4
Gender: female	0	0.5	0	1	0.5
Gender: male	0	0.5	0	1	0.5
Gender: non-binary	0	0.01	0	1	0.08
Education: university degree	0	0.39	0	1	0.49
PID: CAQ	0	0.3	0	1	0.46
PID: none	0	0.14	0	1	0.35
PID: other	0	0.01	0	1	0.09
PID: QCP	0	0.11	0	1	0.31
PID: QLP	0	0.08	0	1	0.28
PID: PQ	0	0.16	0	1	0.37
PID: QS	0	0.2	0	1	0.4
Region: Montreal	0	0.44	0	1	0.5
Region: Quebec	0	0.09	0	1	0.29
Region: rest of Quebec	0	0.47	0	1	0.5

Appendix C: balance test

The plot presents the absolute value of the standardized mean differences across treatment values for all relevant pre-treatment covariates. Standardized mean differences (SMDs) allow to assess balance across variables before and after propensity score matching. The standardization of the measure allows to compare balance across variables of different scales. We present the absolute value since the sign of the standardized differences is not pertinent to assess balance. The values can range between 0 and 1, with 0 representing a perfect balance between treatment conditions. SMDs between .2 and .5 are considered small, between .5 and .8 are considered medium, and above .8 are considered large (Andrade, 2020). There is no universally accepted threshold to assess balance between groups, but the .1 threshold is commonly used to distinguish between negligible and non-negligible differences between groups and we thus identify such threshold with a vertical bar in the plot (Austin, 2011). Since we have three experimental conditions, there are three comparisons and thus three SMD scores for each pre-treatment covariate (control vs policy prime/control vs group prime/policy prime vs group prime). We present the largest SMD score for each covariate, i.e., the maximum imbalance between experimental pairs for each pre-treatment covariate.


Covariate Balance
Maximum imbalance across experimental pairs
PID: CAQ
PID: PQ
Region: Nord-du-Quebec
Region: Lanaudiere
Region: Laval
PID: QCP
Time: week 3
Time: week 5
Region: Montreal
Region: Bas St-Laurent
PID: other
Region: Centre-du-Quebec
Region: Saguenay-Lac-St-Jean
Age group: 18-24
Time: week 4
Language: French
Region: Estrie
PID: QS
Time: week 2
PID: none
Education: university graduate
Age group: 55-64
Gender: Female
Region: Monteregie
Region: Mauricie
Gender: male
Region: Outaouais
Age group: 25-34
PID: QLP
Age group: 65+
Political knowledge
Time: week 1
Age group: 45-54
Gender: non-binary
Age group: 35-44
Region: Gaspesie-Iles-de-la-Madeleine
Region: Capitale-Nationale
Region: Abitibi-Temiscamingue
Region: Chaudiere-Appalaches
Region: Côte-Nord
Region: Laurentides
0.00
0.05
0.10
0.15
Absolute standardized mean differences
Sample
Unweighted
Propensity Score Weighted

Appendix D: treatment effect estimates with propensity score matching and covariate adjustment

To minimize the impact of unbalanced covariates on our results, we combine a matching strategy with covariate adjustment through regression analysis. We first assess whether randomization was successful by conducting a standardized mean test, shown in Appendix C. Balance across the three treatment conditions is evaluated over a long list of pre-treatment covariates. Although the results suggest that randomization was overwhelmingly successful, a slight imbalance is nevertheless found for two partisan groups, an age group and education. To alleviate the potential issues that could arise from covariate imbalance, we first use propensity score matching to ensure the comparability of each treatment group with the control group. Comparing balance before and after applying propensity score weights suggest that our matching technique was successful. We thus use the propensity scores as weights applied to our regression analysis of the treatment effects but also account for imbalanced covariates in our regression models. Doing so allows us to lessen the model dependence of our treatment effects estimates, providing more robust results (Ho et al., 2007). We therefore control for partisanship, age and education in all models presented in this appendix.

Given that we have three experimental conditions ($d \in \{1,2,3\}$), the propensity scores estimation compares observations in the treatment group d to observations in each other experimental group d', computing the odds of being assigned to treatment group d relative to all other experimental groups conditional on pre-treatment covariates $\mathbf{X}$. The estimation proceeds as:

$$\Pr[d_i = d|\mathbf{X_i}] = \frac{\exp\left(\widehat{\alpha_d} + \mathbf{X_i}\widehat{\boldsymbol{\phi}_\mathbf{d}}\right)}{1 + \sum_{d'=1}^{M-1} \exp\left(\widehat{\alpha_{d'}} + \mathbf{X_i}\widehat{\boldsymbol{\phi}_{\mathbf{d}'}}\right)}, d = 1, \ldots, M-1$$

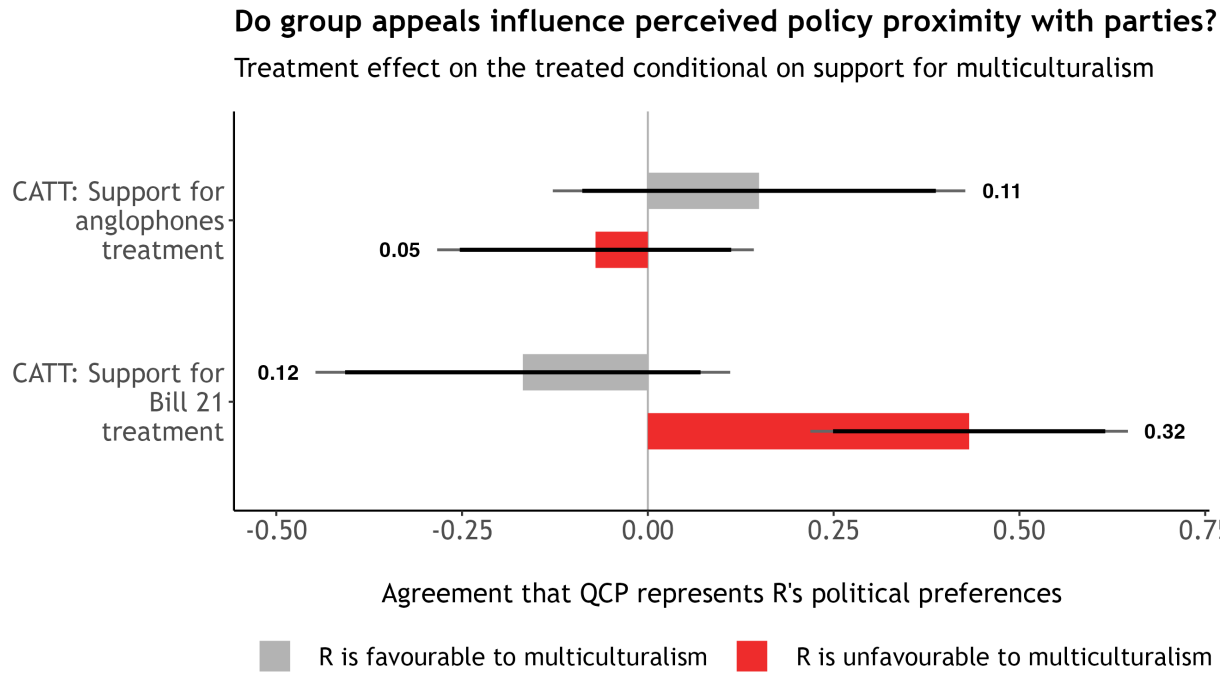
$$\Pr[d_i = M|\mathbf{X_i}] = \frac{1}{1 + \sum_{d'=1}^{M-1} \exp\left(\widehat{\alpha_{d'}} + \mathbf{X_i}\widehat{\boldsymbol{\phi}_{\mathbf{d}'}}\right)}$$

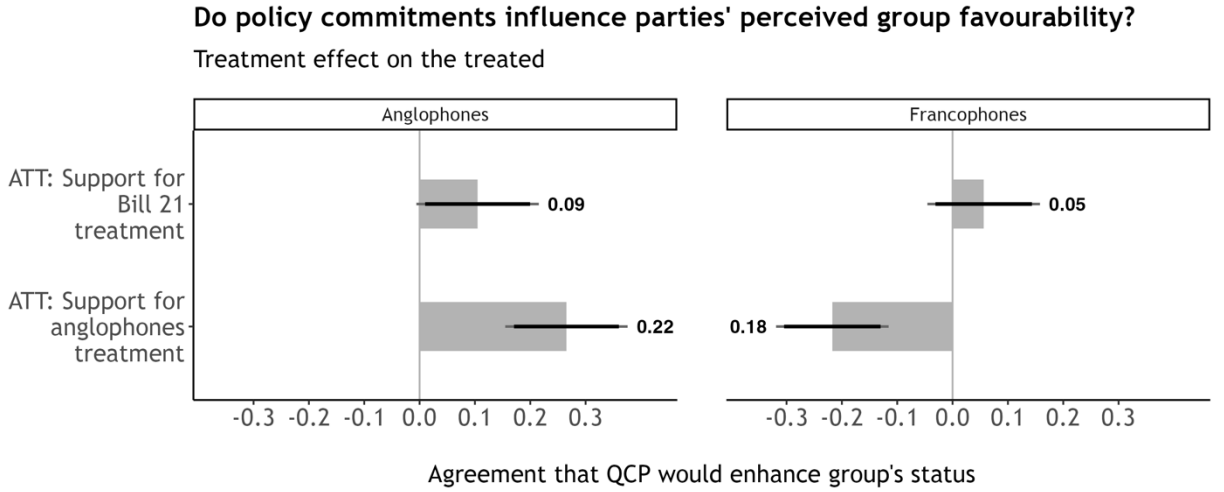
with the control condition treated as the focal group. In essence, the propensity scores downweigh the observations whose covariate values are more common in their treatment group compared to the control group and overweigh observations whose covariate values are less common than in the control group.

A diagonal matrix **P** of estimated propensity scores is then plugged into our ordinary least squares (OLS) equation as

$$\hat{\mathbf{y}} = (\mathbf{X}'\mathbf{P}\mathbf{X})^{-1}\mathbf{X}'\mathbf{P}\mathbf{y}$$

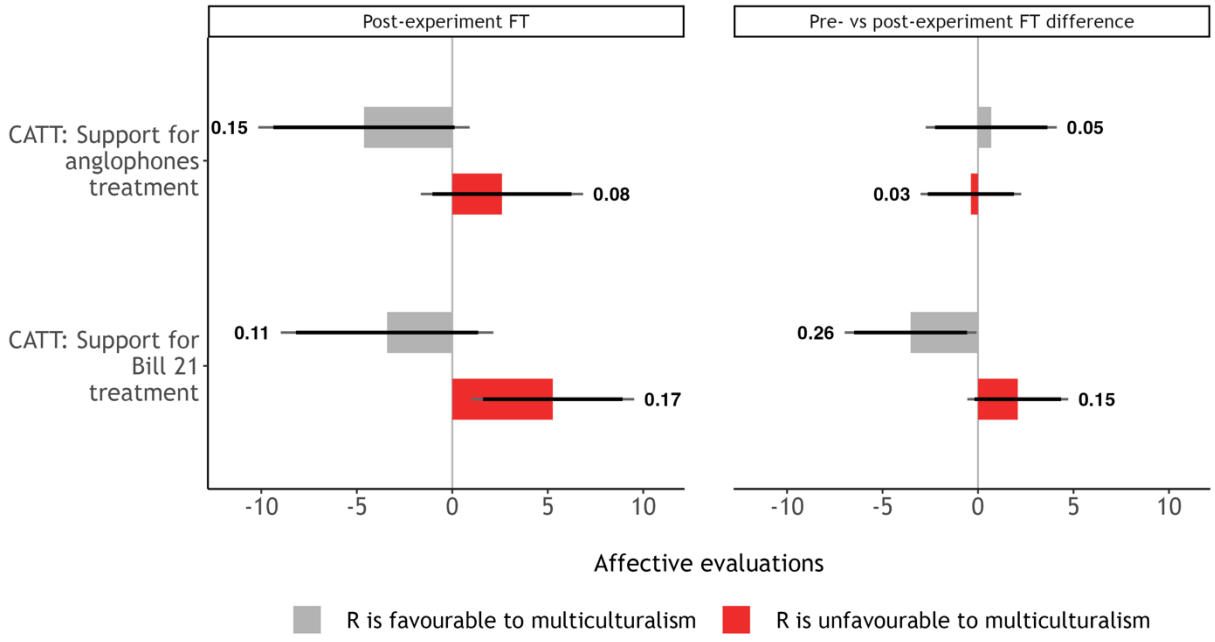
where **X** is a matrix of treatment indicators, treatment moderators (where applicable) and pre-treatment covariates that are imbalanced across experimental conditions and **y** is a column vector containing values of the outcome variable for each respondent.


Do group appeals influence perceived policy proximity with parties?
Treatment effect on the treated conditional on support for multiculturalism
CATT: Support for anglophones treatment
CATT: Support for Bill 21 treatment
0.11
0.05
0.12
0.32
-0.50
-0.25
0.00
0.25
0.50
Agreement that QCP represents R's political preferences
R is favourable to multiculturalism
R is unfavourable to multiculturalism


Do policy commitments influence parties' perceived group favourability?
Treatment effect on the treated
Anglophones
Francophones
ATT: Support for Bill 21 treatment
ATT: Support for anglophones treatment
0.09
0.05
0.22
0.18
-0.3 -0.2 -0.1 0.0 0.1 0.2 0.3
Agreement that QCP would enhance group's status

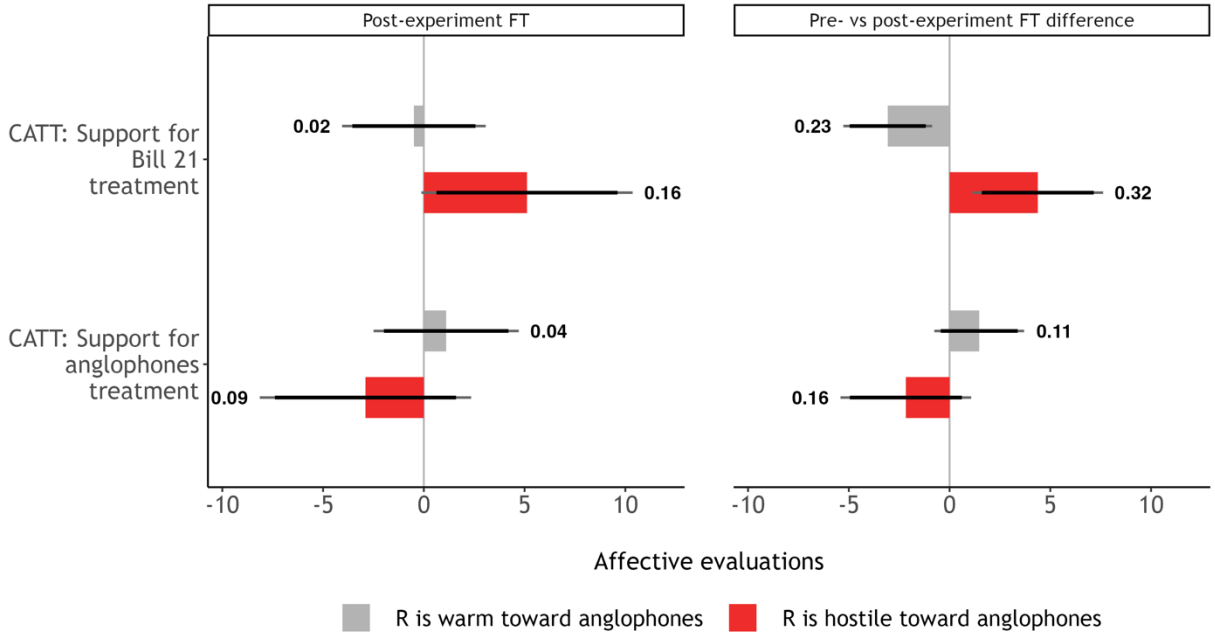
Do group appeals influence affective evaluations of parties?

Treatment effect on the treated conditional on support for multiculturalism

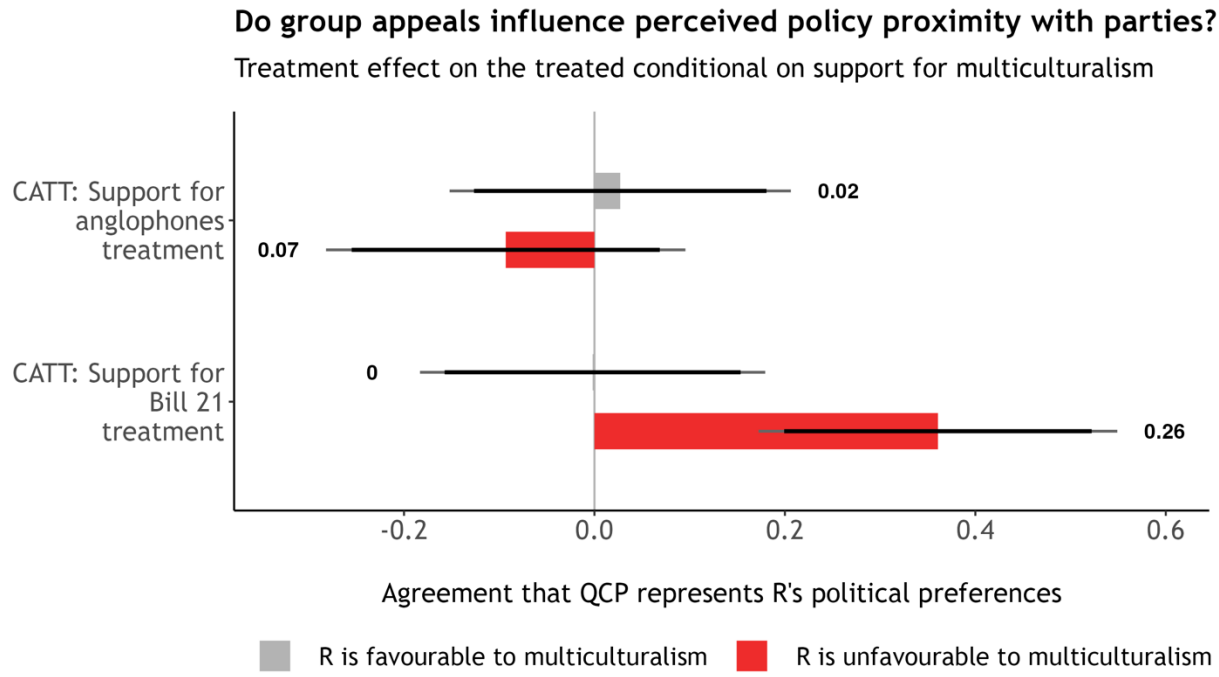


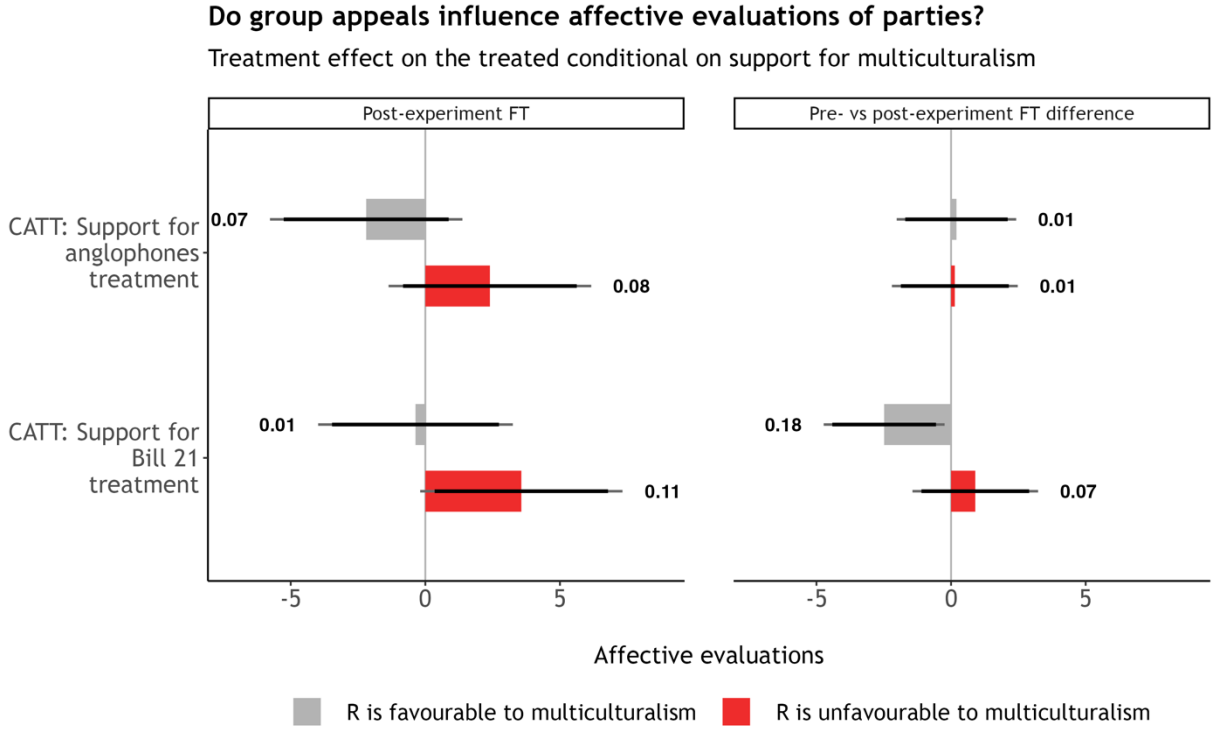
Do policy commitments influence affective evaluations of parties?

Treatment effect on the treated conditional on favourability toward anglophones



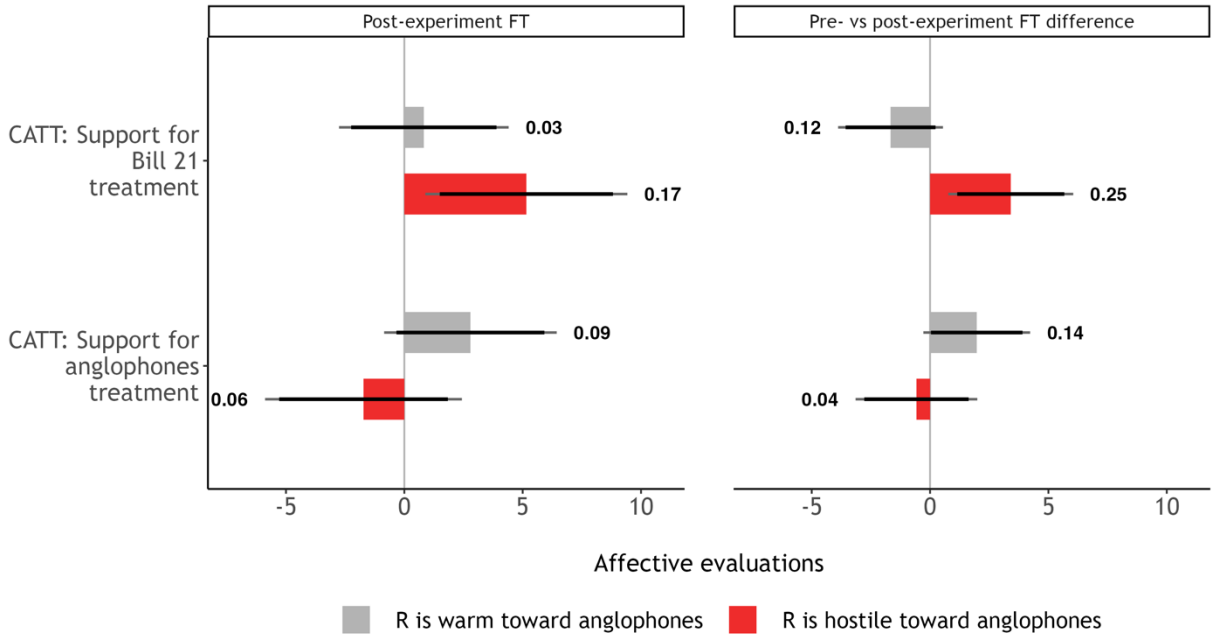
Appendix E: treatment effect estimates using binned versions of moderators



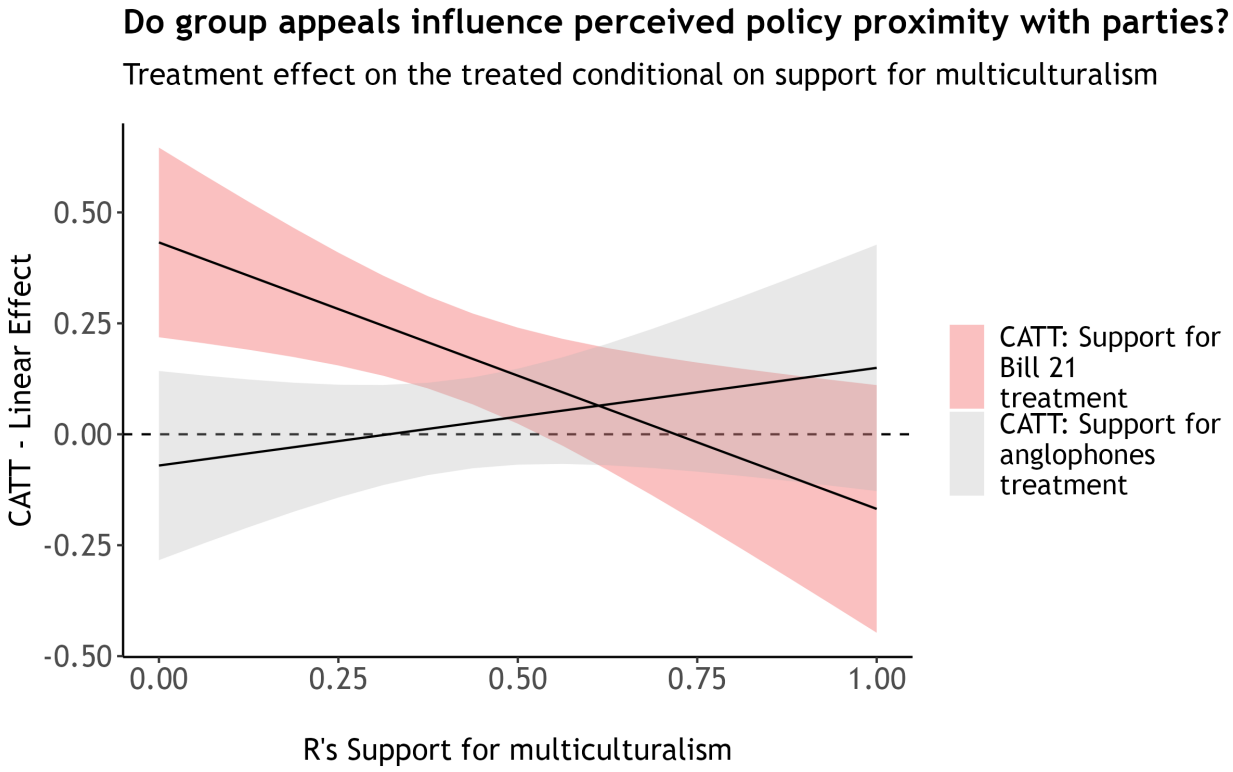


Do policy commitments influence affective evaluations of parties?

Treatment effect on the treated conditional on favourability toward anglophones

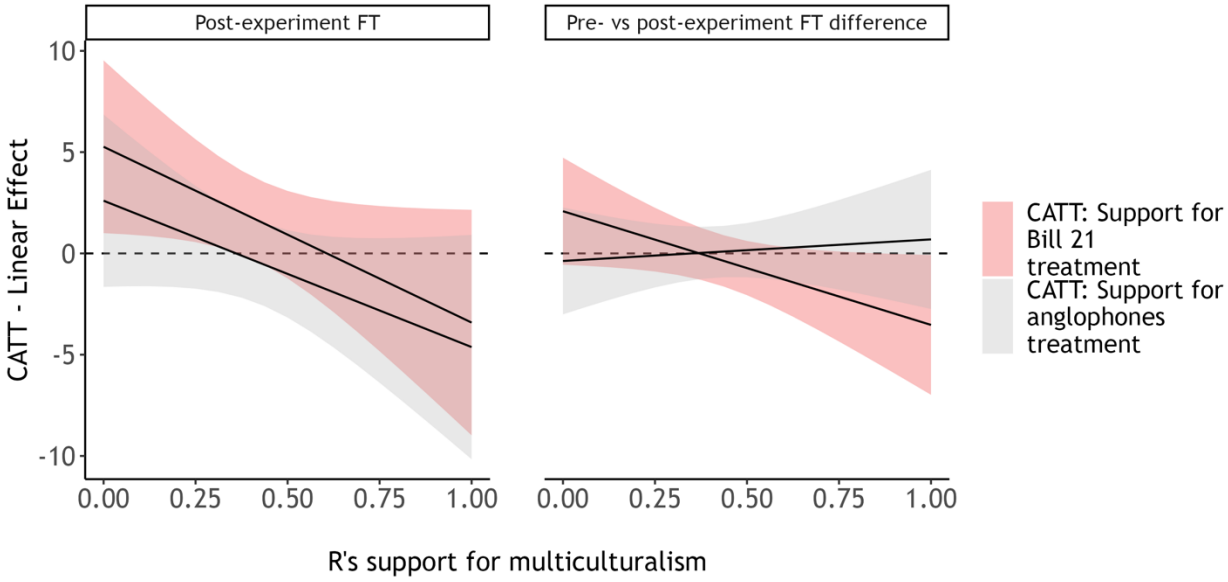


Appendix F: Linear effects of regression results presented in the body of study



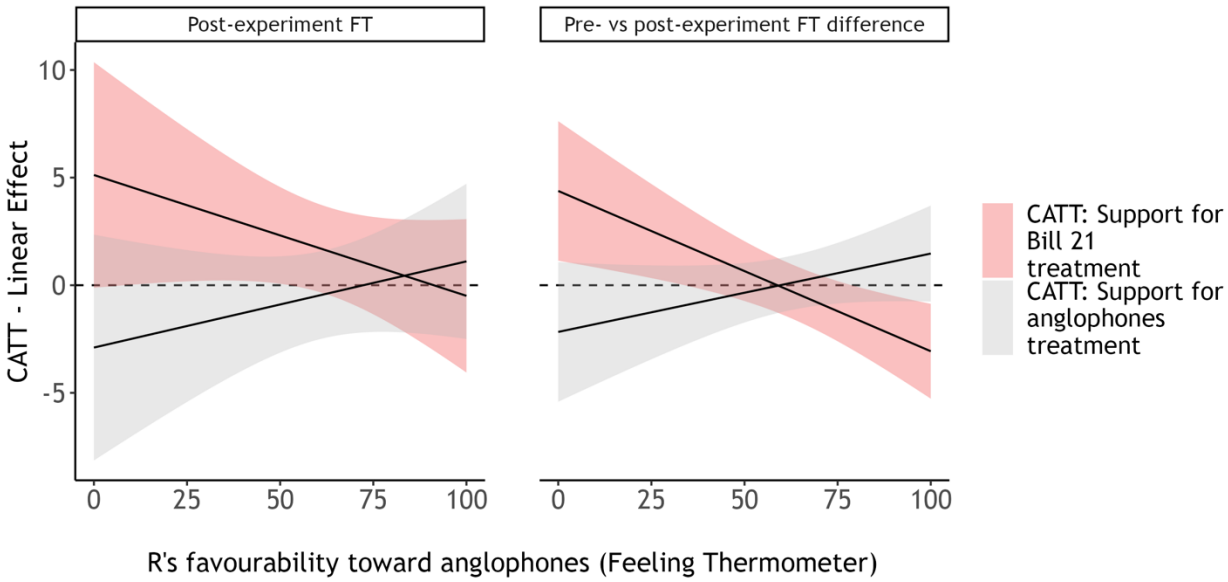
Do group appeals influence affective evaluations of parties?

Treatment effect on the treated conditional on support for multiculturalism



Do policy commitments influence affective evaluations of parties?

Treatment effect on the treated conditional on favourability toward anglophones



Second Study

3. Affective polarization: Can voters distinguish group favourability from policy commitments? A vignette experiment.

Why do political party supporters and their representatives appear to increasingly loathe their opponents in Western world democracies? Research around this question has converged on two competing explanations. The policy-driven perspective focuses on ideological polarization, with scholars claiming that the widening of the ideological distance between parties constitutes the main cause of the growth of affective polarization (Algara & Zur, 2023; Banda & Cluverius, 2018; Lelkes, 2019; Rogowski & Sutherland, 2016; Webster & Abramowitz, 2017). As ideological differences between the parties become clearer, it also becomes easier for voters to identify the party (or parties, if in a multiparty system) that best serves their interests and identify the party (or parties) that runs against their interests (Lupu, 2015). Ideological polarization thus simplifies an otherwise complex political landscape (Somer & McCoy, 2018). As voters develop a clearer view of which parties they like and which ones they dislike, the affective gap between them widens. Accordingly, ideological polarization at the elite level is claimed to be a critical factor enabling the rise of affective polarization. Even if partisan identity is also important in its own right, voters' attitudes are claimed to be moved to a much greater extent by policy considerations when the latter conflict with partisan loyalty (Orr et al., 2023).

A second perspective focuses instead on social identities. This group-driven perspective posits that affective polarization is the result of social partisan sorting, where individuals who identify with different social groups tend to "sort" themselves into distinct parties. This perspective

identifies the decline of cross-cutting identities, i.e., social groups that do not systematically cluster within one of the parties, as a critical factor explaining the rise in affective polarization in the United States (Mason, 2015; 2016; Mason & Wronski, 2018). As partisan groups become increasingly socially homogenous, partisans' ubiquitous exposure to like-minded individuals increases their policy and affective polarization (Hobolt et al., 2024). Consequently, the distinction between social and partisan identities become blurred, leading citizens' in-group bias and out-group prejudice toward social groups to be projected upon parties based on the latter's favourability toward social groups (Iyengar et al., 2012; Mason, 2015; 2016). Even if policy preferences are found to drive affective polarization, they would merely do so by signalling partisan identities (Dias & Lelkes, 2021). This second perspective thus puts self-identities and group attitudes at the heart of the process.

While the two perspectives have distinct theoretical roots, in practice, they are hard to disentangle. Indeed, group identities and policy preferences are so closely connected that it becomes hard for any study to isolate the effect of one from the other (Orr et al., 2023), especially when trying to do so in a realistic fashion – i.e., with high external validity. It is now common knowledge that the great majority of citizens lack time and interest to spend hours informing themselves about politics and thus find ways to "make do" with little political information (Delli Carpini & Keeter, 1996; Downs, 1957; Lupia, 1994; 2016). Heuristics are thus commonly used by voters, who rely on pieces of information they acquire haphazardly to draw inferences about other topics.

This study argues that such heuristics play a key role that has yet to be fully accounted for in the development of affective polarization. To simplify their affective evaluation of parties, voters use parties' and political candidates' group favourability and policy commitments

interchangeably. Consequently, both social identities and ideological polarization account for the rise of affective polarization. Trying to disentangle them, which is precisely what the literature has tried to do so far, is a misguided endeavour since it fails to accurately reflect the cognitive process that voters go through when affectively evaluating parties. This theoretical insight is tested using a vignette experiment focusing on fictitious candidates in a Canadian federal election and the results are fully supportive of my expectations. This important finding calls for a different approach to affective polarization, where the cognitive shortcuts used by voters are better accounted for and fully integrated in its theorization.

3.1. Theory

The main argument put forward in this study is that the identity-driven and policy-driven approaches cannot be disentangled. In fact, the literature treats them as separate mechanisms, but I argue that the causal mechanism put forward by the identity-driven approach also involves policy considerations, whereas the mechanism depicted in the policy-driven approach also involves considerations related to group attitudes. Indeed, the conceptual separation between the two approaches may be artificial, as voters typically use parties and candidates' policy commitments to infer about their favourability toward social groups, all the while also using their group appeals to infer about their policy preferences.

The literature's focus on isolating the influence of policy preferences from social identities – and vice versa – is hard to reconcile with prior findings in the political psychology literature. A large body of research shows that social identities signal policy preferences to voters (e.g., Brady & Sniderman, 1985; Chambers et al., 2012; McDermott, 1998; Page & Shapiro, 1992;

Sanbonmatsu, 2002). Accordingly, in the American context, learning that a person – either a voter or a candidate – identifies as African-American would signal to many that this person is likely to be supportive of the welfare state based on the widespread racist stereotype that African-Americans benefit disproportionately from social programs and thus have a vested interest in maintaining it (HoSang & Lowndes, 2019). Importantly, this signalling mechanism would be based on prejudice rather than factual information and could thus lead individuals to the wrong conclusion. Nevertheless, social identities signal policy preferences, and whether this signalling mechanism is based on stereotypes or factual information does not make a difference, as individuals will use whatever informational shortcut they believe to be useful to update their beliefs, and social identities provide potent heuristics to do so.

Similarly, learning about someone's policy preferences signals their favourability toward social groups. Keeping with the American example, the most direct connection in that regard is with groups that are inherently ideological in nature. For example, learning that someone supports wealth redistribution might signal their partisan identity – Democrat – and their ideological identity – liberal.[9] And these ideological identities themselves also signal a host of other social identities. This is clearest with regards to partisanship, as voters are known to stereotype others based on their partisanship, i.e., they substantially overestimate the in-party share of party-prototypical groups (Ahler and Sood, 2018). In their 2018 study, Ahler and Sood found that Americans believe nearly 40% of Republicans earn over $250,000 a year, whereas the true proportion is below 5%. They also believe nearly a third of Democrats are gay, lesbian or bisexual whereas the true proportion is around 5%. Learning about others' policy preferences thus enables people to infer

[9] Ideological identities have been claimed to operate as other salient social identities in the process of generating in-group bias and out-group prejudice that translate into affective polarization (Mason, 2018b; Mason & Wronski, 2018).

their partisan/ideological identity, which itself strongly signals salient social identities and group attitudes.

Policy preferences can also signal one's favourability toward social groups that are not ideological in nature. For example, learning that a party leader calls into question abortion could operate as a heuristic to signal that they are supportive of a more traditional vision of women's place within society that puts emphasis on their role as mothers. In doing so, they could be understood to challenge women groups' quest for social empowerment. This tendency to associate social groups with policy preferences is further reinforced by parties' frequent simultaneous use of group appeals and policy commitments (Horn et al., 2021; Huber et al., 2024).

Of course, by using such heuristics, individuals are bound to reach false conclusions, at least part of the time. Some individuals could theoretically be opposed to abortion for religious or moral reasons but otherwise support the social empowerment of women. Once again though, the precision of the mechanism depicted above does not change the fact that policy preferences are used by voters to infer about others' favourability toward social groups, regardless of whether these shortcuts lead them to the right conclusions or not.

In sum, the previous paragraphs illustrate how challenging it is to study the impact of social identities in isolation from policy preferences and vice versa. Even when scholars find a way of doing so (e.g., Dias and Lelkes, 2021; Mason, 2015), questions arise over the external validity of the results given that voters do not disconnect the two concepts when evaluating parties. Accordingly, the findings of such studies might extrapolate to very few real-world citizens given the artificial nature of the distinction between social identities and policy preferences.

3.1.1. Combining the identity-driven and policy-driven approaches

This section formalizes our previous discussion by presenting a novel causal mechanism that incorporates both the identity-driven and policy-driven approaches. In doing so, I claim that it better reflects the cognitive process that determines voters' affective evaluations of parties and candidates, which in turn can foster affective polarization.

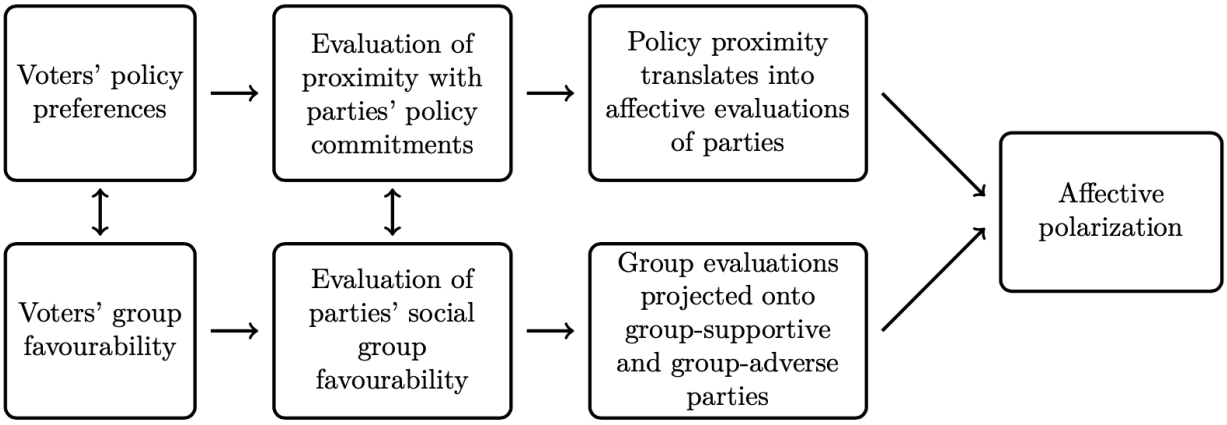


***Figure 3.1**: heuristic mechanism.*

Figure 3.1 presents a conceptual summary of the causal mechanism being tested in this study. The top row of the figure presents the policy-driven mechanism, whereas the bottom row presents the group-driven mechanism. The novelty of the mechanism presented in this figure is to account for two important bidirectional relationships: that between voters' policy preferences and their group favourability, as well as that between their perceived policy proximity with parties and their perception of parties' favourability toward social groups. These two bidirectional relationships are the reason why I claim that the policy-driven and group-driven mechanisms are entangled together in voters' minds, which is the essence of the heuristic mechanism underlying this dissertation.

So far, each row of the mechanism – the policy-driven perspective and the group-driven perspective – have mostly been tested in isolation. Many have tested the relationship between policy preferences (at the elite and voter level) and affective polarization but have not focused on the interconnection between policy debates and group identities (Algara & Zur, 2023; Banda and Cluverius, 2018; Robison and Moskowitz, 2019; Webster and Abramowitz, 2017). Usually, when scholars address both mechanisms, it is to pit them against one another without considering their potentially endogenous nature (e.g., Mason, 2015; 2016; Rogowski and Sutherland, 2016). Banda and Cluverius (2018), for example, find that increased elite polarization fosters greater affective polarization among voters, but fail to investigate how parties' social alliances might impact voters' perception of elite polarization. Similarly, Lelkes (2019) finds a stronger connection between affective polarization and ideological polarization than between affective polarization and partisan identification but does not account for the capacity of partisan identification to signal policy preferences (and vice versa); it also does not investigate other group identities and group attitudes. Others, such as Dias and Lelkes (2021), do consider the interconnection, but only partly, as they only focus on the entanglement between partisan identities and policy preferences, again leaving aside other group identities that can also signal policy preferences and foster strong affective reactions among voters. Some point out the interconnection between identities and policy preferences, such as Lelkes (2018) and Mason (2015), but do not empirically test how much one signals the other and how that might influence the workings of each mechanism on voters' affective reactions to parties and candidates. Orr et al. (2023) provide the most direct test of the interconnection between the two mechanisms through formal modeling, yet without theoretically addressing cognitive shortcuts. Accordingly, while much is now understood about how policy

preferences and social identities shape affective evaluations of parties and candidates, a lot remains to be understood about how each might feed into the other and mediate its effect.

The main limitation of the diagram above relates to how it overlooks partisan identification, which is itself entangled in a chicken-and-egg relationship with policy preferences and group attitudes (see Johnston, 2006). The debate over whether party ID precedes policy preferences and group attitudes (or vice versa) prevents me from detailing exactly where it would be positioned in the mechanism. Nevertheless, whether partisanship has precedence over policy preferences and group attitudes (or vice versa) does not appear to impact the workings of the heuristic mechanism. Indeed, regardless of the source of voters' policy preferences and group attitudes – whether it comes from their own values, experiences and thought process, or whether it is dictated by their party ID – what is most important is that voters have group attitudes and policy considerations in mind when assessing candidates and developing affective evaluations of them. That voters' policy preferences and group attitudes purely represents the sum of their preferences (Fiorina, 1981) or is strongly influenced by their partisanship (Campbell et al., 1960) – or a mix of both, as the literature seems to suggest – has theoretical consequences, but likely does not impact the workings of the mechanism depicted above. Accordingly, I refrain from integrating it in the theoretical model above to avoid adding to it an additional layer of complexity that is not essential to the argument developed in this study.

For the policy-driven approach, shown in the top row, the main driver of affective polarization is citizens' desire to see their policy preferences being implemented. This desire leads them to evaluate the proximity between their policy preferences and the policy commitments of each party to determine how likely each party is to implement their preferred policies. Yet, an extant literature demonstrates how voters' policy preferences are – at least partly – endogenous to

their group identities (Berelson, Lazarsfeld and McPhee, 1954; Lazarsfeld, Berelson and Gaudet, 1948; Campbell et al., 1960; Cramer, 2016; Dawson, 1994), notably through the influence of group norms (Asch, 1951; Sherif, 1956; White and Laird, 2020). Further, considering that voters must typically make do with little political information, they also necessarily use non-policy considerations when evaluating their policy proximity to parties. Supporting such expectation, experimental studies have shown that voters use group appeals to infer about the ideological preferences of candidates (Robison et al., 2021). Candidates' proximity with social groups thus constitutes a heuristic for voters to infer about their policy preferences, by assuming that they support policies that are deemed popular among social groups that they appeal to. Using such heuristic, voters can evaluate the proximity between their policy preferences and the candidates', using such information to inform their affective evaluations of candidates, as those considered closer to the voter are positively evaluated, whereas those that are more distant receive colder evaluations. When a large gap exists between the voters' proximity to different candidates, this translates into a situation where the voter is affectively polarized toward them. The partisan sorting of social groups thus plays an indirect but nevertheless important role in the policy-driven approach to affective polarization.

The bottom row presents the mechanism for the group-driven approach, where group favourability is the main driver of affective polarization. I leave aside the notion of social sorting, which is causally anterior to group favourability. Indeed, as groups become "sorted" in different lifestyles, preferences and environments, groups are perceived to be more distant of one another, which fosters dislike, i.e., lower group favourability. Accordingly, to simplify the causal mechanism and leave aside details that are unnecessary for the purposes of the argument developed

in this paper, I focus on this simplified version of the group-driven mechanism. Further, this simplified version is also much more amenable to experimental manipulations.

Importantly, I also deviate from some of the prior literature's focus on group *identification* to rather focus on group *favourability*. Many of the salient political debates that contribute to polarize electorates are cultural in nature and revolve around minority groups and policies that impact them. These groups often constitute a small minority of a population – such as indigenous peoples in Canada or undocumented migrants in Northern America and Western Europe – and sometimes do not even have citizenship rights yet nevertheless find themselves at the heart of polarized political debates. Accordingly, with so many people rooting for greater rights and more favourable policies for these groups, the notion of group identification is not sufficient to understand who roots for these groups and why it may trigger affective polarization. Accordingly, I focus on the simplified notion of group favourability, which captures whether an individual is supportive of the group and its demands regardless of whether they identify with the group or not. This favourability is likely rooted in the group's perceived deservingness, which is a subjective perception and has been linked to support for policies benefiting a group (Heuer and Zimmermann, 2020; van Oorschot, 2006). As individuals seek to favour groups that they deem deserving of public help, they try to identify the party or parties that are also supportive of such groups and identify the party or parties that stand in the way of such empowerment. Voters then project their group evaluations onto the parties that are aligned with them, which enhances the voter's affective polarization. The salience of social groups and their alignment with specific parties is thus critical for the group-driven approach to explain affective polarization.

But how do voters identify group-supportive and group-adverse parties? It is a very well-known fact within political science scholarship that the bulk of voters possess very low levels of

political information (Converse, 1964; Delli Carpini & Keeter, 1996) and will cling onto whatever heuristic is available to them to minimize the amount of time and energy they need to spend on informing themselves (Downs, 1957; Lupia, 1994; Popkin, 1991; Sniderman et al., 1991). Consequently, it is to be expected that voters will use parties' policy commitments as means of inferring their stance toward social groups. A striking example of such heuristic came during the last federal election, when Quebec's Bill 21 – a provincial legislation prohibiting certain public servants from wearing religious symbols while in service – came at the forefront of federal political debates. Three parties – the Liberals, the NDP and the Greens – were in opposition to the bill, whereas only one national party, the Conservatives, expressed a clear commitment not to support a federal challenge of the Bill, which was highly popular among the Quebec population. Immediately, the three parties that expressed opposition to the Bill were put on the backfoot in the province, having to justify how their position does not amount to an opposition to Quebecers and their values. The province's premier even reacted by expressing support for the Conservatives, explicitly priming the party's opposition to fund court challenges to Bill 21, and claiming that a Conservative government "would be better for the Quebec nation."[10] Accordingly, parties' positions on a policy debate that was put into the spotlight by being raised during the campaign became used by Quebecers – especially nationalist ones – to infer about parties' support for them as a social group.

The causal mechanism introduced here thus integrates both approaches by putting front and center the fact that regardless of whether voters are mainly driven by their policy preferences or their group attitudes, they are nevertheless likely to consider both parties' policy commitments and their expressions of group favourability when forming opinions about such parties.

[10] https://nationalpost.com/news/politics/election-2021/quebec-premier-praises-tory-leader-otoole-says-npd-liberals-dangerous-for-quebec (retrieved December 29th, 2023).

3.1.2. Testing the entanglement in the Canadian context

This paper contributes to a burgeoning comparative literature on affective polarization by testing the posited entanglement of both mechanisms through a vignette experiment embedded in an original survey fielded on a representative sample of the Canadian population (n = 833). Little work has investigated affective polarization in Canada, but studies have identified increased ideological polarization at the elite level (Cochrane, 2015), along with increased levels of ideological consistency and sorting among voters (Kevins & Soroka, 2018; Merkley, 2022). Respondents were exposed to four vignettes, each presenting a fictitious candidate, with a prompt presented before the vignettes stating that all four fictitious candidates were independent. The fictitious candidates were not attributed any party affiliation since the party line is so strictly enforced in Canada that providing such information about the candidates would run the risk of overpowering the other pieces of information.

The vignette experiment was pre-registered and is focused on testing the entanglement of the policy-driven and group-driven mechanisms.[11] I first expect that respondents will acknowledge a candidate's group favourability by perceiving them to be more favourable to the group than respondents who are not provided such information.

H1a: respondents exposed to a candidate's group appeal will infer that the candidate is more favourable to the group appealed to than respondents in the control group.

[11] The pre-registration can be accessed using the following link: https://aspredicted.org/j53fq.pdf .

Similarly, I also expect that respondents will acknowledge a candidate's policy commitment by perceiving them to be more favourable to the policy than respondents who are not provided such information.

H1b: respondents exposed to a candidate's policy commitment will infer that the candidate is more supportive of the policy than respondents in the control group.

Based on the heuristic mechanism detailed above, I expect that respondents will use the candidate's policy commitment to infer about their group favourability and assume that the candidate is favourable to groups that are stereotypically associated with the policy supported by the candidate.

H2a: respondents exposed to a candidate's policy commitment will infer that the candidate is more favourable to a group associated with the policy than respondents in the control group.

The heuristic mechanism detailed above also leads me to expect that perceiving the candidate to be favourable to a social group will lead respondents to infer that the candidate is supportive of policies that are stereotypically associated with the group.

H2b: respondents exposed to a candidate's group appeal will infer that the candidate is more supportive of the policy associated with the group than respondents in the control group.

These pieces of information that respondents learn about the candidates – and how they use them to make inferences about the candidates – should impact their affective evaluations of candidates. Intuitively, I expect that upon learning that a candidate supports a policy, respondents who also support the policy should become more positive toward the candidate, and more negative toward them if they do not support the policy. This is the gist of the policy-driven mechanism to affective polarization, which finds empirical support in numerous studies.

H3a: respondents (un)supportive of a policy that a candidate supports (policy condition) will have a (lower) higher affective evaluation of the candidate than those in the control group.

Yet, and this is where I expand upon the policy-driven mechanism, I also expect policy considerations to influence candidate perceptions even when voters are not provided direct information about the candidate's policy commitments. Upon learning that a candidate is favourable to a social group, I expect respondents to infer that the candidate is also favourable to policies that the group is stereotypically associated with (H2b). Accordingly, if respondents support such policies, they should have a higher affective evaluation of the candidate than respondents who do not support such policies.

H3b: respondents supportive of a policy that is associated with a group that a candidate appeals to (group condition) will have a greater affective evaluation of the candidate than those that do not support the policy.

Similarly, respondents who are favourable to a group toward which a candidate expresses favourability should have a more positive affective evaluation of the candidate than those who are unfavourable toward the group. This is the main argument developed in the group-driven framework and also finds empirical support in a number of studies.

H4a: respondents favourable to a group that a candidate appeals to (group condition) will have a greater affective evaluation of the candidate than those that are unfavourable to the group.

Again, the heuristic mechanism detailed above leads me to add another layer on top of the group-driven mechanism. Based on voters' use of heuristics, I also expect that respondents should infer candidates' group attitudes based on their policy commitments (H2a). Accordingly, respondents who are favourable to groups associated with a policy that a candidate supports should infer that the latter is also favourable to the group and have a more positive affective evaluation of them. I expect the opposite for respondents who are unfavourable toward groups associated with the policy supported by the candidate.

H4b: respondents favourable to a group associated with a policy that a candidate supports (policy condition) will have a greater affective evaluation of the candidate than those that are unfavourable to the group.

Experimental conditions were randomized at the vignette level, with a control condition offering only sociodemographic information about the fictitious candidate, a policy condition adding information about a policy that the candidate endorses, while a group condition rather

supplemented the sociodemographic information with an expression of favourability toward a social group. The sociodemographic information provided in all vignettes focused on candidates' age, gender, profession, marital status and number of children. These pieces of information were also randomized for each vignette that a respondent saw to avoid them influencing the treatment effects. Providing such background information about candidates was necessary to help respondents in the control condition – who were not presented with any information about the candidates' policy commitments and group favourability – form opinions about the candidates and thus provide a reliable benchmark against which the two treatment conditions can be evaluated. In doing so, the external validity of the experiment is also enhanced, as respondents are provided with many pieces of information about a candidate, like in real elections.

Each vignette focused on a single combination of policy and social group that are stereotypically associated together, except the second vignette that was mismatched to keep respondents attentive and is left out of the analysis.[12] Treatment conditions in the first vignette focused on the LGBTQ+ community (group condition) and enhancing access to non-binary bathrooms (policy condition), the third vignette focused on hunters (group condition) and firearms restrictions (policy condition), while the fourth vignette focused on First Nations (group condition) and upgrading water systems of indigenous reserves (policy condition).

Here is an example of a control condition for the first vignette:

Daniel Martin is 52 years old and has a background in human resources management. He has a partner and no children.

[12] As both treatment conditions and the follow-up questions focus on a combination of policy and social group that are stereotypically associated together for all vignettes, we placed a mismatched vignette to keep respondents attentive and avoid having them "learn" the heuristic mechanism being tested.

The group treatment version of the same vignette:

Daniel Martin is 52 years old and has a background in human resources management. He has a partner and no children. He recently claimed that he will work to defend the interests of sexually diverse people across the country.

And the policy treatment version of the same vignette:

Daniel Martin is 52 years old and has a background in human resources management. He has a partner and no children. He is committed to enhancing access to non-binary bathrooms across the country.

A limitation of this study related to the design of the experiment is worth addressing. Given that this experiment is focused on the comparison between two types of treatments, the policy and group treatments are designed to be as similar as possible to maximize their comparability. Accordingly, the group treatment primes a candidate's favourability toward a social group, which allows voters to infer about the alignment between such group and the candidate, but also indirectly hints at policy considerations as it refers to the target group of potential policies, thus bringing the policy mechanism in the picture. This is certainly sub-optimal as it would rather be ideal for each treatment not to prime the other type of consideration even implicitly. This would allow the experimental condition to be fully distinct from one another, which is the gold standard that experimental manipulations always strive for. Unfortunately, this is particularly challenging in this context given the entanglement between policy and social groups that is discussed at length in the

theoretical framework of this study. Further, given the importance of having maximally similar group and policy treatments for comparison purposes, this is a trade-off that I consider acceptable. Nevertheless, to avoid an implicit connection between the two primes, subsequent studies could potentially benefit from modeling the social sorting mechanism in a more direct way. Indeed, focusing on cross-cutting cleavages – or lack thereof – rather than group appeals may allow to alleviate the interconnection between both mechanisms.

As is standard in survey analyses, only Canadian citizens of voting age (18 years old and above) who finished the survey were kept in the sample. Additionally, as pre-registered, respondents who failed the attention check, who straight-lined the matrix tables in the survey and speeders are removed from the sample. These three exclusion criteria are established to ensure high data quality and resulted in 64 inattentive respondents being removed from the sample used to present results in the body of the article, although results using the full sample (including inattentive respondents) are also shown in Appendix H (and yield substantively identical results) given important concerns over the generalizability of analyses removing inattentive respondents raised by Berinsky et al. (2013). I slightly deviate from the pre-registration by qualifying as speeders the fastest 5% of the sample, whereas the pre-registration stated that I would remove respondents whose answer time was two standard deviations or more below the mean answer time. Some people took many hours, in some cases even up to 24 hours, to answer the survey, which distorted the mean answer time and made it useless to identify speeders. Accordingly, the fastest 5% of the sample were considered speeders, whereas the slowest 5% were considered inattentive and also removed from the sample.

To ensure the representativity of the sample, quotas were applied for respondents' gender, age groups and province of residence. As a result, the sample is very representative of the Canadian

population in terms of gender with 50% of respondents identifying as females, 49% identifying as males and 1% identifying as non-binary, but is somewhat older than the overall Canadian population, at a mean age of 51 years old compared to 42 years old in the population, and also slightly more educated, as 45% of respondents are university graduates compared to 27% among all Canadians.[13] The sample is also slightly more anglophone than the Canadian population, as 85% took the survey in English whereas 76% of Canadians have English as their first official language. Looking at respondents' province of residence, the sample is well reflective of the Canadian population. Comparing the percentage of respondents residing in each province to the same metric within the Canadian census, the largest discrepancies are for Quebec and British Columbia, where we find a difference of roughly five percentage points.[14] Discrepancies for all other provinces fall below 1.2 percentage points, indicating precise geographic representation.

As per pre-registration, I tested balance across experimental conditions for each of the three vignettes used in the analysis and also for the pooled models where data for all three vignettes are pooled together. Balance was tested across an extensive list of sociodemographic covariates: age, education, language, province of residence, place of birth, partisanship and political knowledge. The pooled models are found to be slightly imbalanced for six out of the 23 variables that are tested. After using propensity score matching, all imbalances are corrected. As for the three separate models, imbalances are more prevalent, as up to 17 variables are found to be imbalanced. Yet, after applying propensity score matching, no imbalances remain. Full balance tests and adjustment results can be found in Appendices B and C. Yet, given recent serious concerns expressed about covariate adjustment contributing to making experimental results unreplicable

[13] Canadian population data taken from the 2021 Canadian census.
[14] 17.4% of respondents live in Quebec, compared to 23% of all Canadians, and 18.4% of respondents live in British Columbia, compared to 13.5% of all Canadians.

(Mutz et al., 2019), I present the main test results without any covariate adjustment. Results using a doubly robust estimation strategy where observations are weighted using propensity score matching to reach balanced experimental conditions and used along a covariate adjustment strategy in regression models are presented in the appendix and yield substantively identical results (see Ho et al., 2007 for more details on doubly robust estimation).

H1a and H2a are tested by regressing respondents' perceptions of candidates' favourability toward the group appealed to over their treatment condition. H1b and H2b are tested by regressing respondents' perceptions of candidates' support for the group-stereotypical policy over their treatment condition. For each vignette, respondents in the control condition were questioned about the same set of groups and policies as respondents in the treatment conditions. Yet, the absence of group appeals and policy commitments in the control condition vignettes leads me to expect that no relationship would be identified between their experimental condition and the candidate's perceived group and policy support.

H3a and H3b are tested by regressing respondents' affective evaluations of candidates over their treatment conditions interacted with their support for the policy that the vignette focuses on. Finally, H4a and H4b are tested by regressing respondents' affective evaluations of candidates over their treatment conditions interacted with their favourability toward the group that the vignette focuses on. For both sets of hypotheses, I expect that candidates' group appeals and policy commitments will impact respondent's affective evaluations of them. When exposed to group appeals, respondents should adjust their affective evaluations of candidates consistently with their attitude toward the group and toward policies that the group is associated with. When exposed to policy commitments, respondents should similarly adjust their affective evaluations of candidates

consistently with their policy preferences and their attitude toward groups associated with policies that candidates commit to.

Standard-errors are clustered at the respondent level in the pooled models presented in the main text, whereas the separate vignette models presented in the appendix use the regular asymptotic standard-errors. Summary descriptive statistics of all variables used in the analysis are presented in Appendix A.

3.2. Results

Results are presented graphically, with the full tabular results available in Appendix D. The results pertaining to H1a and H2a are presented in Figure 3.2. Respondents in the group condition, who were primed with the candidates' favourability toward a group, unsurprisingly perceive them to be more favourable toward the group appealed to than respondents in the control condition, who were not provided any information about the candidates' group attitudes. Less intuitively, we find some evidence supporting the heuristic mechanism detailed above as respondents exposed to candidates' policy commitments also perceive them to be more favourable toward social groups that are stereotypically associated with the policies that candidates commit to implementing. This is noteworthy given that respondents reach such conclusion without receiving any direct information about the candidate's attitude toward the group. Both effects are substantively large, i.e., 1.74 on an 11-point scale for the group treatment and 1.7 for the policy treatment, which corresponds to a .7 standard deviation change in the outcome variable in both cases.

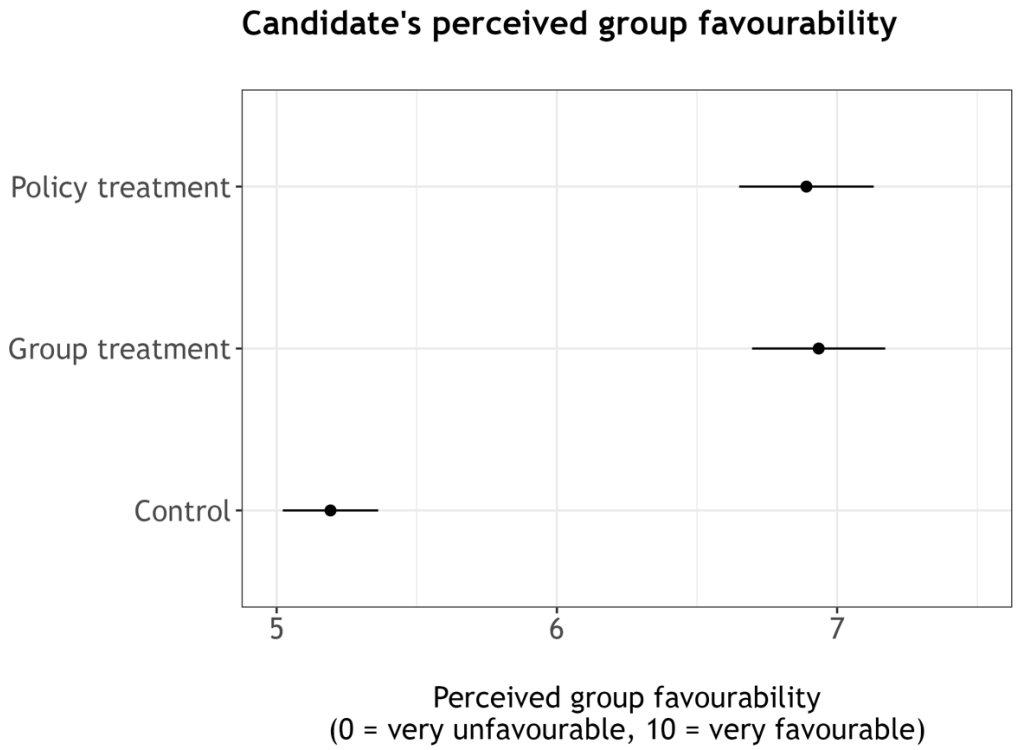


Figure 3.2*: results pertaining to H1a and H2a. Dots represent predicted values in each experimental condition with .05 confidence interval, with predictions generated using observed values.*

Importantly, the causal effect of the policy and group treatments are not only large, but they are also statistically indistinguishable (two-tailed *t*-test, p=.38), suggesting that voters process both pieces of information nearly identically. Accordingly, this suggests that even though respondents in the policy treatment needed to use the heuristic mechanism to infer candidates' group attitudes, they still reached the same conclusion as those in the group treatment condition, who were provided direct information about the candidates' group attitudes. This result suggests voters use the heuristic mechanism depicted in this piece, which provides them a potent way to organize the political information to which they are exposed.

In sum, these first results uncover clear evidence supporting the first part of the heuristic mechanism presented in this paper, i.e., that voters use policy commitments to infer about a candidate's favourability toward social groups.

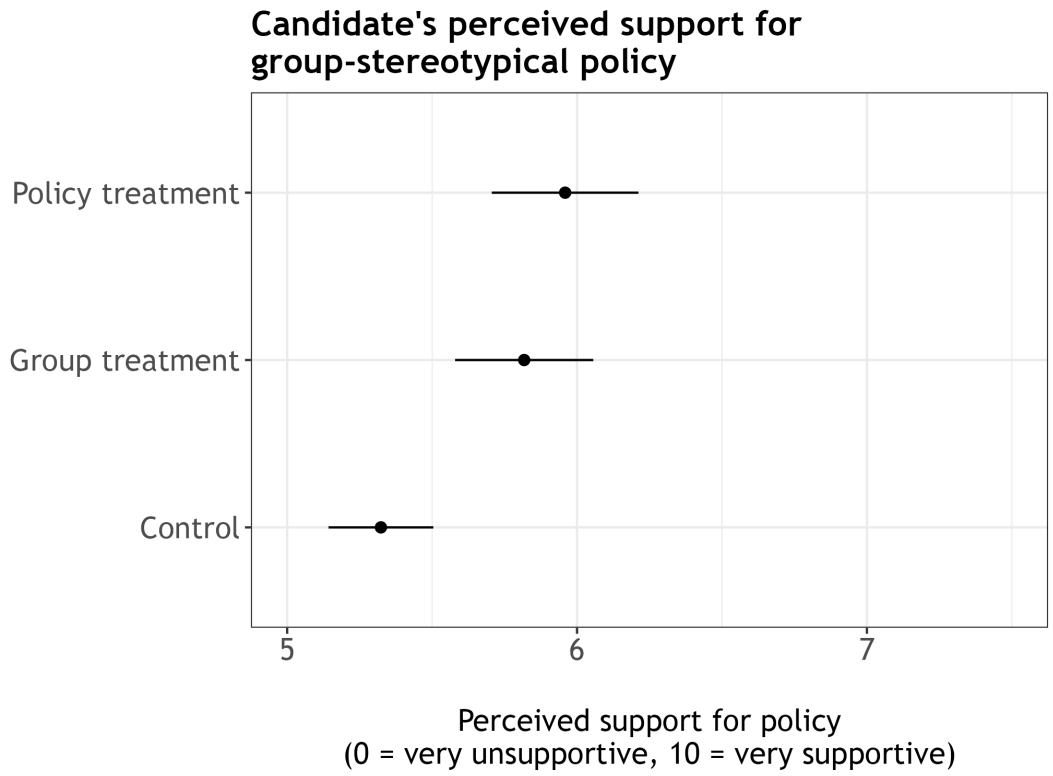


Figure 3.3*: results pertaining to H1b and H2b. Dots represent predicted values in each experimental condition with .05 confidence interval, with predictions generated using observed values.*

Testing H1b and H2b, I find similar results, albeit the magnitude of the causal effect is smaller. Results in Figure 3.3 show that respondents who are exposed to a mention of candidates' support for a policy perceive them to be more favourable to the policy than respondents in the control group, who were not provided information about the candidate's policy preferences. The causal effect is of .64 units on an 11-point scale and corresponds to a .24 standard deviation units change in the outcome variable. I also find evidence supporting the use of heuristics, as results for the group treatment are similar. Indeed, respondents who were primed with candidates' favourability toward a social group also perceive them to be more supportive of a policy stereotypically associated with the group than respondents in the control group, who were not provided information about neither the candidate's policy preferences or group favourability. The treatment effect is of .5, i.e., a .2 standard deviation units change. Again, the causal effect for

respondents in the group and policy treatments are statistically indistinguishable (two-tailed *t*-test, *p*=.81), again supporting the use of heuristics.

While the causal effect of the policy and group treatments are both statistically significant and in the expected direction, one should note that they are of relatively small magnitude compared to the results for perceived group support (Figure 3.2). Even the policy treatment – which provides respondents about direct information about candidates' policy commitments – yields a relatively small causal effect on perceived policy preferences. A potential explanation, which future work could test, lies in the fact that many voters are cynical about candidates' election promises, and thus may believe that candidates hide their "true colors" in terms of policy preferences during an election, whereas voters may be less cynical toward candidates' group appeals. Nevertheless, H1b and H2b are supported.

So far, the results suggest that voters use candidates' expressions of group favourability and policy commitments interchangeably to infer about their support for social groups and policies. I now analyze whether such shortcuts also come into play when voters form affective evaluations of candidates. Figure 3.4 presents the results pertaining to H3a and H3b and again provide unqualified support for both hypotheses. Intuitively, results for the control group demonstrate that there is no relationship between respondents' affective evaluation of candidates and respondents' support for the policy that each vignette focuses on. In other words, with no information about the candidate's policy commitments or group favourability, respondents' own policy preferences do not impact their affect toward the fictitious candidates, as their affective evaluations remain constant around 5.5. As discussed above, this is expected considering that the control condition does not provide respondents any information that could allow them to directly or indirectly infer

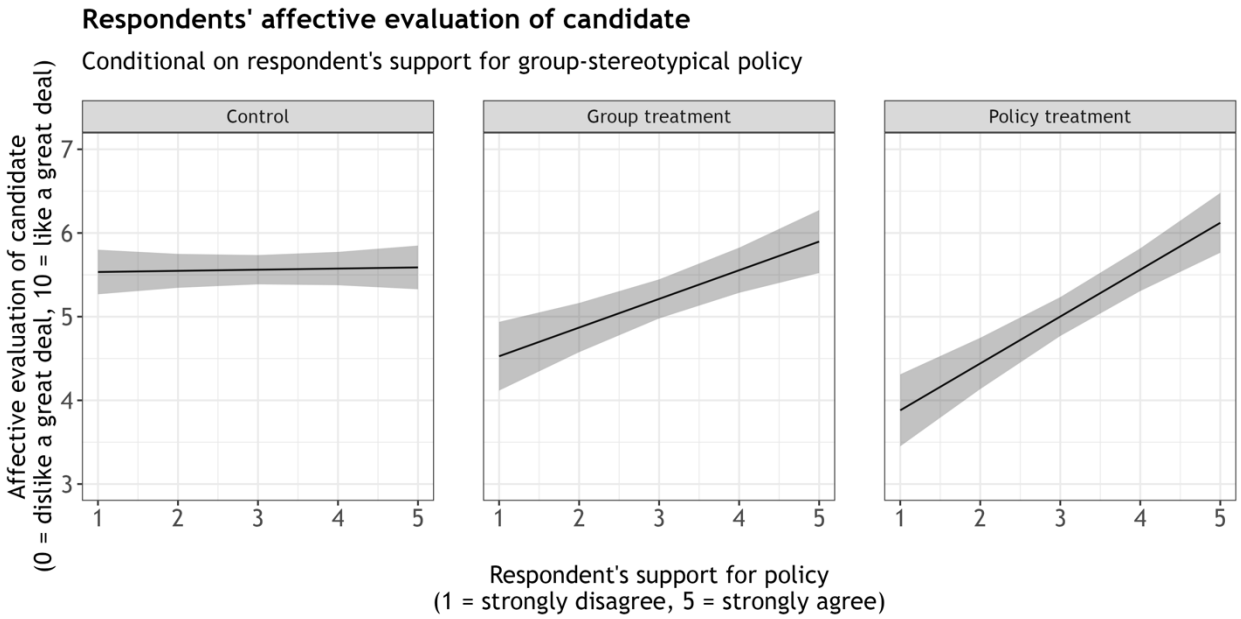


Figure 3.4*: results pertaining to H3a and H3b. Lines represent predicted values in each experimental condition at different levels of the moderating variable with .05 confidence interval. Predictions are generated using observed values.*

about the candidate's support for the policy being considered, thus forcing respondents to evaluate the candidate based on non-policy-related characteristics.

When given information about the candidate's policy commitments though (policy treatment), respondents' policy preferences bear a strong positive relationship with their affective evaluations of the candidates, i.e., the more they support the policy that the candidate endorses, the more they like the candidate. For respondents who dislike the policy the most, their expected affective evaluation of the candidate is 3.9, whereas it lies at 6.1 for those who like the policy the most, nearly a full standard deviation increase (0.92). As further evidence of the heuristic mechanism, we also find a similar relationship when respondents are presented with information about the candidates' group favourability (group treatment). When exposed to candidates' support for a social group, there is also a positive relationship between respondents' support for a group-stereotypical policy and their affect toward candidates, i.e., the more they support a policy stereotypically associated with a group that candidates appeal to, the more they also like the

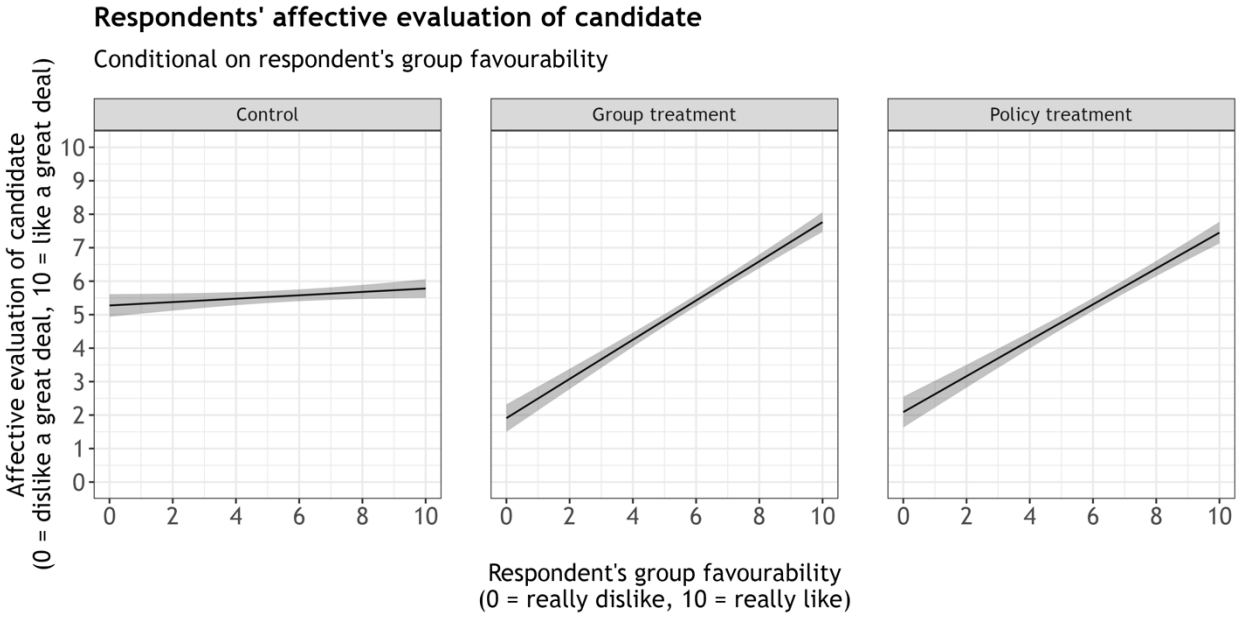


Figure 3.5*: results pertaining to H4a and H4b. Lines represent predicted values in each experimental condition at different levels of the moderating variable with .05 confidence interval. Predictions are generated using observed values.*

candidates. For respondents who totally dislike the policy (1/5), their expected affective evaluation of the candidate is 4.53, whereas it moves up to 5.9 for those who like the policy the most (5/5). This significant jump represents slightly more than half of a standard deviation increase (0.56) in affective evaluation of the candidate. The relationship between respondents' support for policy and their affect toward candidates is not exactly as strong among respondents exposed to the group treatment as those exposed to the policy treatment, which is to be expected given the use of a cognitive shortcut, but it remains a clear positive relationship of comparable magnitude in both cases.

My final empirical test, focusing on H4a and H4b, investigates respondents' group attitudes and how they relate to their affective evaluations of candidates. Surprisingly, results in Figure 3.5 show a small positive (p = .052) relationship between control group respondents' group favourability and their affect toward the candidate, despite not being provided any information about the candidate's policy preferences or group attitudes. Indeed, those respondents' expected

affective evaluation of the candidate moves from 5.3 for those with the lowest group favourability (0/10) to 5.8 for those with the highest group favourability (10/10). Yet, I refrain from reading into this result, as it falls short of conventional levels of statistical significance, is of small substantive size and is not supported by any theoretical expectation.

Of greater interest is the much stronger positive relationship that appears between respondents in both treatment conditions' group favourability and their affect toward candidates. Indeed, respondents who like the group that fictitious candidates appeal to (group treatment) are more positively evaluated by respondents, and vice versa when they dislike the group. This relationship is very strong, as the expected affective evaluation of candidates moves from 1.9 to 7.8, a 2.4 standard deviation units increase. Turning to the policy treatment condition, the results provide support once again for the heuristic mechanism. As expected, respondents who are favourable to a group that is stereotypically associated with a policy that a candidate commits to express warmer feelings toward the candidate, and vice versa for those who dislike the group associated with the policy. The expected affective evaluation of the candidate moves from 2.1 to 7.5, a .5 units smaller effect than the group treatment, which again can possibly be explained by the use of the heuristic mechanism. Indeed, as voters need to infer candidates' group favourability indirectly – i.e., based on their policy commitments – they are likely to connect the information to group favourability in a slightly weaker way than when they are provided direct information about candidates' group attitudes. Nevertheless, moving respondents' group favourability from 0 to 10 results in a sizeable change of 2.2 standard deviation units in their affective evaluation of the candidate. The impact of the two treatment conditions is thus of similar magnitude, which further suggests that respondents use policy commitments and group favourability as interchangeable pieces of information.

3.3. Discussion

Great progress has been made in the last decade in understanding the roots of affective polarization. The literature has converged on two theories that have mainly been presented as competing with one another. Unfortunately, scholars are only starting to acknowledge and address the potential entanglement of both mechanisms along with its consequences (see Orr et al., 2023). This lack of attention is worrisome as this entanglement harbours significant theoretical implications. Indeed, if the policy-driven and group-driven mechanisms are found to be entangled as this paper suggests, these two competing theories could in fact be reconciled and integrated into a single, common causal mechanism accounting for the rise of affective polarization.

This paper provides a direct test of this entanglement by focusing on the cognitive shortcuts that voters are well known to use. In essence, most voters have stereotypes about which policies social groups support – and which policies are beneficial to them – and I expect them to rely on such stereotypes to evaluate how favourable to policies and groups are political candidates. To test this expectation, respondents were presented with three experimental vignettes focusing on fictitious candidates that either incorporate an expression of favourability toward a social group that is commonly associated with a set of policies, a commitment to implement a policy that is also stereotypically associated with a social group, or a control condition that only included sociodemographic information about the candidate. The analysis was conducted as per its pre-registration and the results provide unqualified support for the heuristic mechanism being tested.

These results are very consequential as they suggest that respondents use candidates' policy commitments and expressions of group favourability interchangeably to evaluate them. Accordingly, it appears that the distinction between policies and social groups that scholars in the field have drawn fails to reflect the simplified way in which most voters process political

information. The theoretical consequences of such findings for our understanding of affective polarization have to do with what makes voters become polarized. Most of the literature presents this as an either/or question: is it ideological polarization or social sorting that makes voters become polarized? The results of this experiment suggest that the answer may be both, as voters appear not to make a distinction between group attitudes and policy commitments. Such finding likely only applies to social groups and policy issues that are salient enough to be connected in most voter's minds, as less salient issues and social groups are unlikely to be the source of affective polarization among most of the electorate. Indeed, voters are unlikely to be able to connect groups and policies that they rarely hear about or do not care about, especially voters that are less informed politically. Further, these issues and groups that are inconsequential in voters' minds cannot be expected to yield strong affective reactions from their part. Accordingly, that voters can only connect salient issues and social groups should not be interpreted as limiting the impact of the heuristic mechanism on affective polarization. Unfortunately, the nature of the experiment presented in this paper prevents me from further investigating this assumption, as all three issues and social groups were selected to create a most-likely case and neutralize the impact of salience. I invite further research to build on the results presented in this paper by comparing salient and non-salient issues and groups.

A second limitation of this study is the absence of partisan identification from both the theoretical mechanism and the experimental design. To maximize the internal validity of the experiment, all fictitious candidates were designed to be independent. How exactly might partisanship impact the mechanism depicted above constitutes an important question worthy of an article-length treatment of its own. The least I can say is that it certainly mediates the way voters receive and interpret cues such as policy commitments and group favourability. Importantly, the

lesser politically informed voters might rely prominently on their party's interpretation of other parties' and candidates' policy commitments and group appeals, especially for more technical issues and less salient social groups. Those pieces of information that require extensive political knowledge to be used as heuristics may thus become available to lesser informed voters through their favorite party's interpretation. Accordingly, while the matter remains to be more thoroughly investigated, I suspect that partisanship does not entirely overwhelm the heuristic mechanism detailed in this paper and, under some circumstances, could potentially even reinforce it.

3.4. Conclusion

This article set out to provide a theoretical refinement to our understanding of the sources of affective polarization by putting front and center a cognitive mechanism that is critical to understand how voters form affective evaluations of political candidates but has yet to receive a significant amount of attention from scholars. Numerous articles convincingly demonstrate that group attitudes and policy preferences are strongly connected to affective polarization in a variety of contexts. Yet, the way voters may connect social groups to policies and vice versa has mostly only been mentioned in passing. This is regrettable, as the way candidates' policy commitments are assumed to suggest group favourability (and vice versa) by voters has potentially consequential implications on our understanding of affective polarization. Indeed, when voters are primed with information on candidates' policy commitments, they also use such information to infer about their group favourability. Accordingly, their affective reaction upon learning the candidate's policy commitment cannot only be tied to the latter, as it could also be the result of voters inferring about their group favourability.

To substantiate its theoretical proposition, this study presented the results of a pre-registered vignette experiment that was conducted to test the mechanism stated above. Respondents were presented three experimental (and one placebo) vignettes where a fictitious candidate was presented to them. Based on this paper's focus on voters' use of heuristics to process political information, I expected that voters would use information about fictitious candidates' policy commitments and group favourability interchangeably, i.e., that they would use one as a signal for the other. Finding support for such expectation would imply that affective polarization is not driven by *either* policy preferences or group attitudes, but rather by *both* as they are processed as one and the same in voters' minds, irrespective of the important nuances between the two mechanisms.

The analysis provided unqualified support for the empirical expectations listed above. When provided information about fictitious candidates' policy commitments, voters made strong inferences about their group attitudes, and vice versa when provided information about the candidates' group appeals instead. These inferences convey significant implications for the study of affective polarization, as we found that upon learning a candidate's policy commitments, voters adjusted their affective evaluations to match their group attitude toward a social group commonly associated with the policy. The opposite was also found to happen when voters learned about a candidate's group attitudes.

These results suggest that work focusing on the sources of affective polarization should account for the murky way in which voters process political information and abandon the either/or perspective that has so far dominated the literature. Instead, more work should focus on better understanding the entanglement of both mechanisms in voters' minds. In that regard, this study provides important empirical evidence, yet much remains to uncover. Importantly, scholars should

focus on deepening our understanding of the entanglement of policy and groups in citizens' minds, i.e., whether some groups and policies are more likely to be differentiated than others and whether some citizens are better able than others to operate such differentiation. In the meantime, I encourage the theorization of affective polarization to take stock of these important findings and better account for the impact of cognitive shortcuts when discussing the sources of such polarization. At an even higher level, the literature on the topic would likely benefit from a deeper engagement with the political psychology literature. Considering how affective polarization is deeply connected to how voters process political information, and given the numerous limitations of how voters do so as pointed out by the political psychology literature, there are likely many benefits to better integrating insights from the latter. This study focuses on cognitive shortcuts, but it is to be expected that other cognitive processes also come into play to blur the expected relationship between policy commitments, group appeals and affective polarization.

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3.6. Appendix

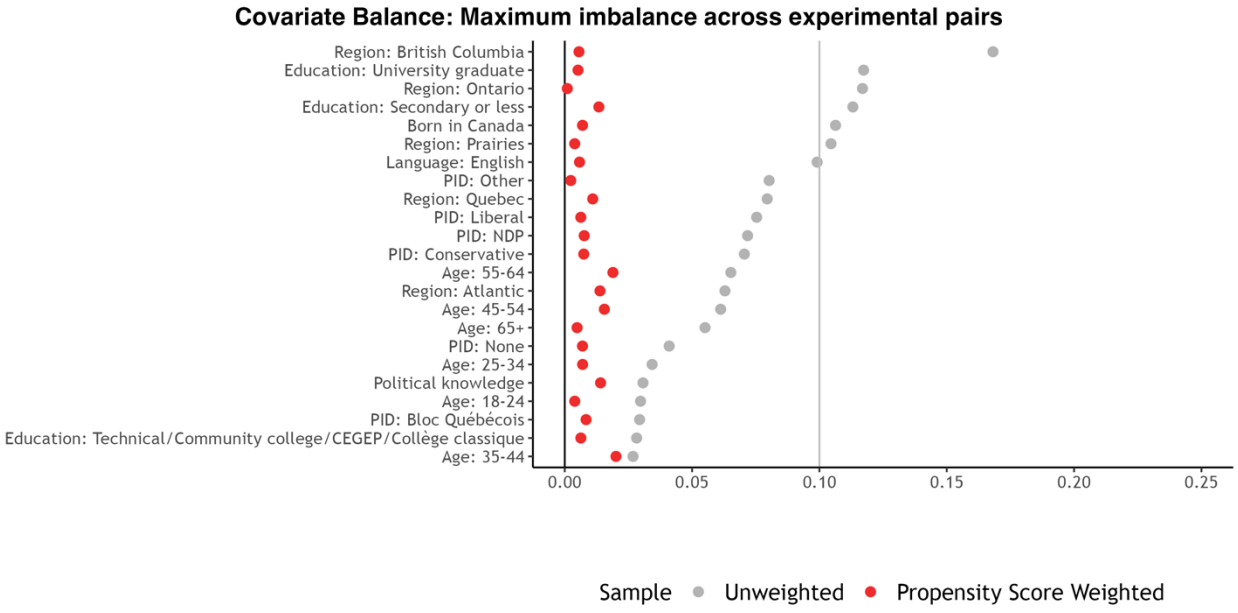
A - Summary descriptive statistics

Variable	Min.	Mean	Median	Max.	Std. Dev.
Age: 18-24	0	0.08	0	1	0.27
Age: 25-34	0	0.15	0	1	0.35
Age: 35-44	0	0.13	0	1	0.34
Age: 45-54	0	0.19	0	1	0.39
Age: 55-64	0	0.23	0	1	0.42
Age: 65+	0	0.22	0	1	0.42
Born in Canada	0	0.87	1	1	0.33
Education: secondary or less	0	0.21	0	1	0.4
Education: Technical/Community college/CEGEP/Collège classique	0	0.34	0	1	0.47
Education: university graduate	0	0.45	0	1	0.5
Group attitude: gun owners	0	3.81	3	10	3.11
Group attitude: indigenous peoples	0	7.04	7	10	2.42
Group attitude: LGBTQ+ community	0	6.03	7	10	3
Language: English	0	0.85	1	1	0.36
Policy support: expansion of non-binary bathrooms	1	3.41	4	5	1.42
Policy support: stricter firearms restrictions	1	3.38	4	5	1.43
Policy support: upgrading water systems in indigenous reserves	1	3.46	4	5	1.44
PID: Bloc Québécois	0	0.06	0	1	0.23
PID: Conservative Party	0	0.25	0	1	0.43
PID: Liberal Party	0	0.24	0	1	0.43
PID: New Democratic Party	0	0.16	0	1	0.37
PID: None	0	0.25	0	1	0.43
PID: Other	0	0.04	0	1	0.2
Political knowledge	0	2.14	2	4	1.14
Region: Atlantic	0	0.09	0	1	0.28
Region: British Columbia	0	0.19	0	1	0.39
Region: Ontario	0	0.37	0	1	0.48
Region: Prairies	0	0.18	0	1	0.38
Region: Quebec	0	0.18	0	1	0.38
Vignette 1 condition: control group	0	0.32	0	1	0.47
Vignette 1 condition: group treatment	0	0.33	0	1	0.47
Vignette 1 condition: policy treatment	0	0.35	0	1	0.48
Vignette 1: candidate feeling thermometer	0	5.19	5	10	2.4
Vignette 1: perceived candidate group favourability	0	6.27	6	10	2.35
Vignette 1: perceived candidate policy support	0	6.07	6	10	2.43
Vignette 3 condition: control group	0	0.35	0	1	0.48
Vignette 3 condition: group treatment	0	0.34	0	1	0.47
Vignette 3 condition: policy treatment	0	0.31	0	1	0.46
Vignette 3: candidate feeling thermometer	0	4.78	5	10	2.47

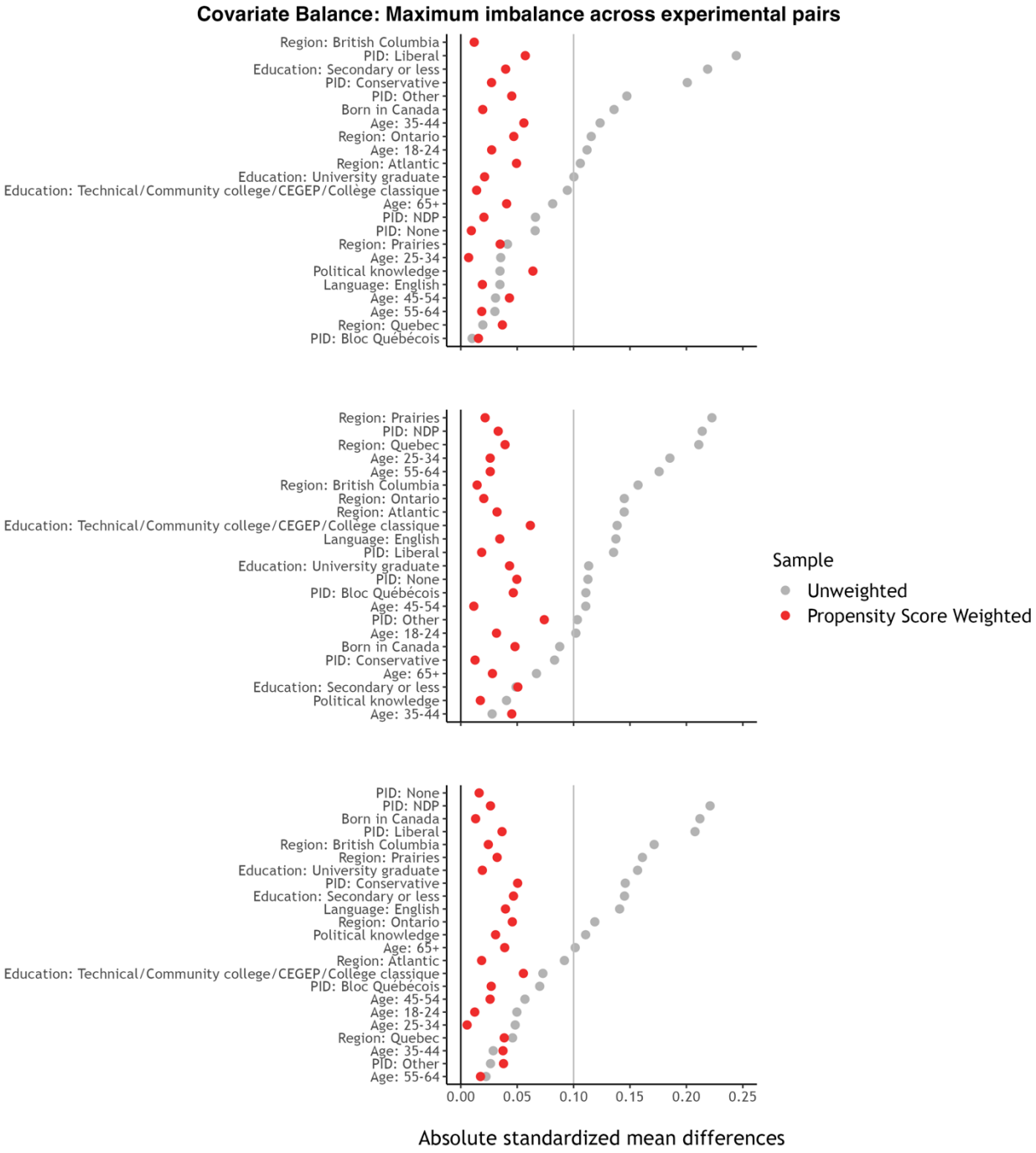
Variable	Min.	Mean	Median	Max.	Std. Dev.
Vignette 3: perceived candidate group favourability	0	5.88	6	10	2.72
Vignette 3: perceived candidate policy support	0	4.46	5	10	2.67
Vignette 4 condition: control group	0	0.34	0	1	0.48
Vignette 4 condition: group treatment	0	0.33	0	1	0.47
Vignette 4 condition: policy treatment	0	0.33	0	1	0.47
Vignette 4: candidate feeling thermometer	0	6	6	10	2.11
Vignette 4: perceived candidate group favourability	0	6.42	7	10	2.19
Vignette 4: perceived candidate policy support	0	6.39	6	10	2.21

Table 3.1*: Summary descriptive statistics of variables used in the analysis.*

B – Balance test and covariate adjustment for pooled models



C – Balance tests and covariate adjustment for separate models

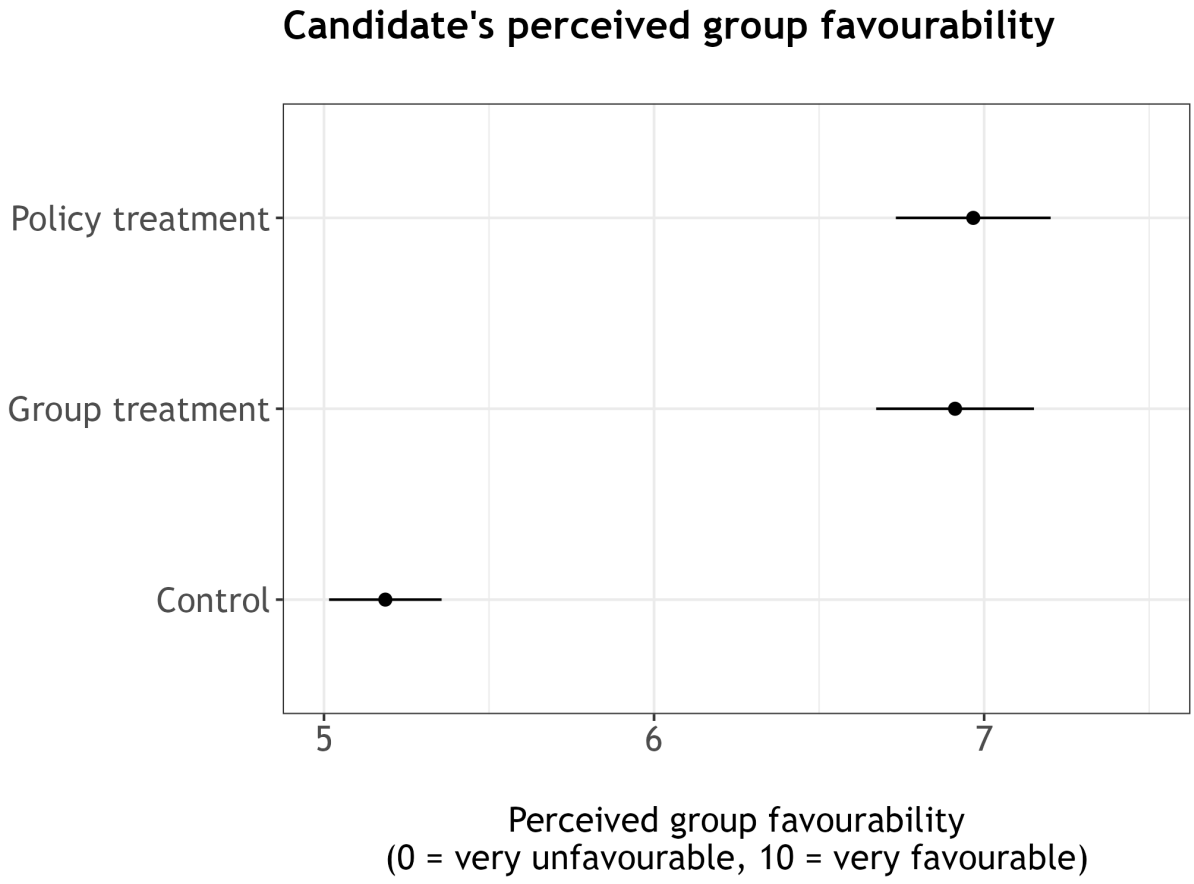


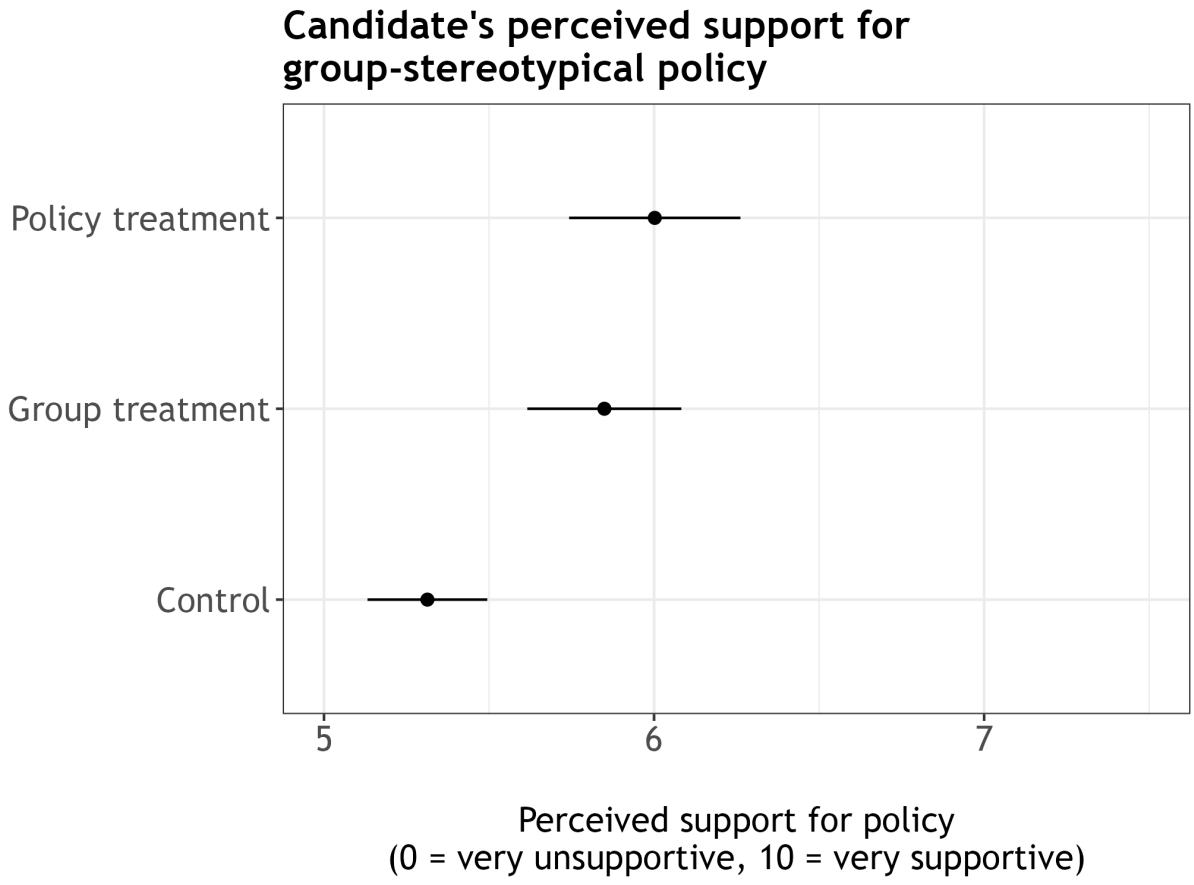
D - Pooled model results – without covariate adjustment (tables)

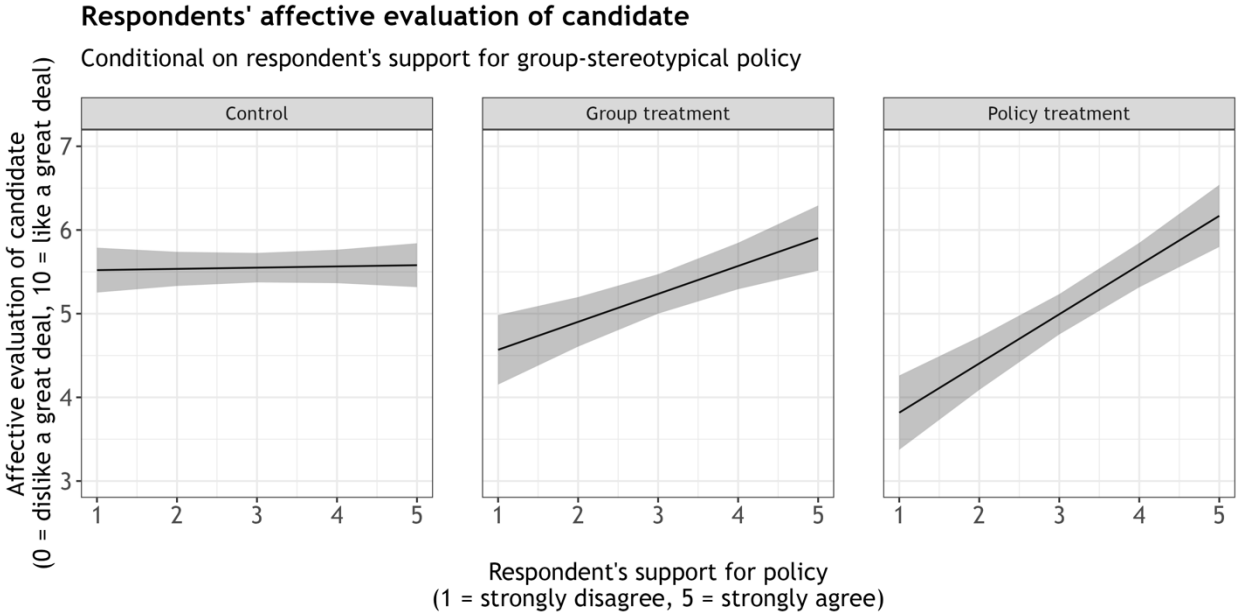
	H1a & H2a	**H1b & H2b**	**H3a & H3b**	**H4a & H4b**
Condition: group treatment	1.742 (0.144)	0.494 (0.147)	-1.335 (0.344)	-3.366 (0.268)
Condition: policy treatment	1.698 (0.145)	0.635 (0.154)	-2.199 (0.347)	-3.186 (0.281)
Respondent's support for policy			0.014 (0.050)	
Condition: group treatment × Respondent's support for policy			0.329 (0.098)	
Condition: policy treatment × Respondent's support for policy			0.546 (0.095)	
Respondent's group attitude (FT score)				0.051 (0.026)
Condition: group treatment × Respondent's group attitude (FT score)				0.535 (0.040)
Condition: policy treatment × Respondent's group attitude (FT score)				0.486 (0.042)
(Intercept)	5.192 (0.087)	5.323 (0.092)	5.520 (0.177)	5.275 (0.172)
Observations	1584	1584	1584	1584
R^2	0.110	0.011	0.059	0.347
RMSE	2.32	2.65	2.37	1.97

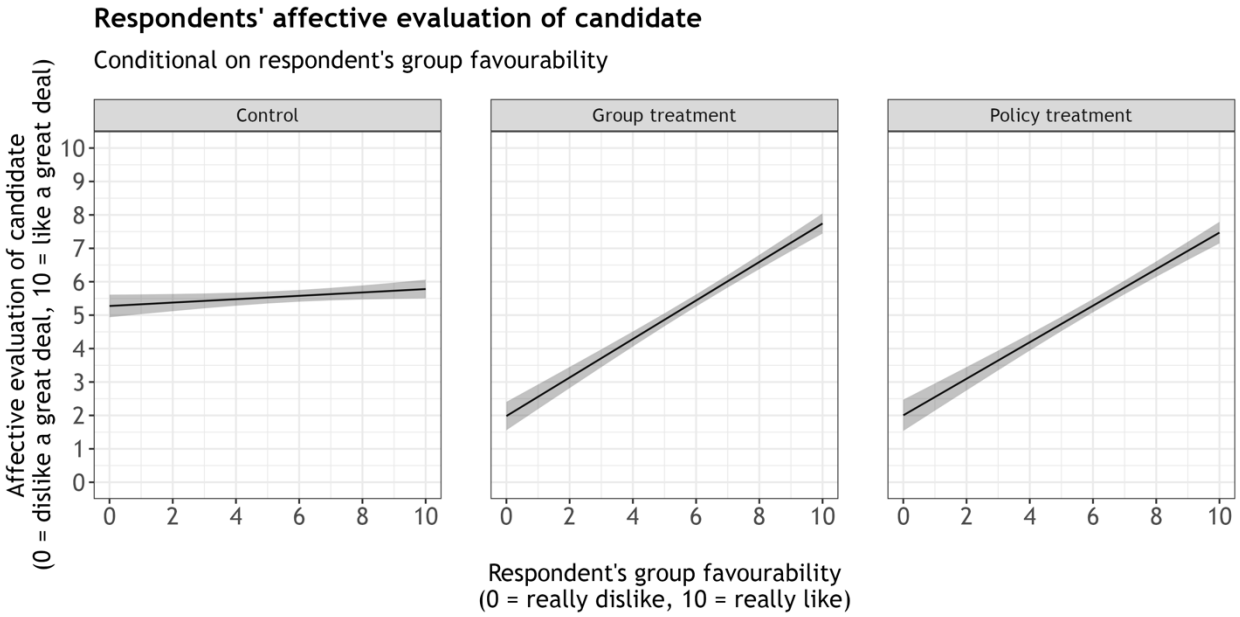
Table 3.2*: Entries are unstandardized OLS coefficients with standard-errors clustered at the respondent-level in parentheses.*

E - Pooled model results – with covariate adjustment




Candidate's perceived support for group-stereotypical policy
Policy treatment
Group treatment
Control
5
6
7
Perceived support for policy
(0 = very unsupportive, 10 = very supportive)


Respondents' affective evaluation of candidate
Conditional on respondent's support for group-stereotypical policy
Control
Group treatment
Policy treatment
Affective evaluation of candidate
(0 = dislike a great deal, 10 = like a great deal)
3
4
5
6
7
1
2
3
4
5
Respondent's support for policy
(1 = strongly disagree, 5 = strongly agree)

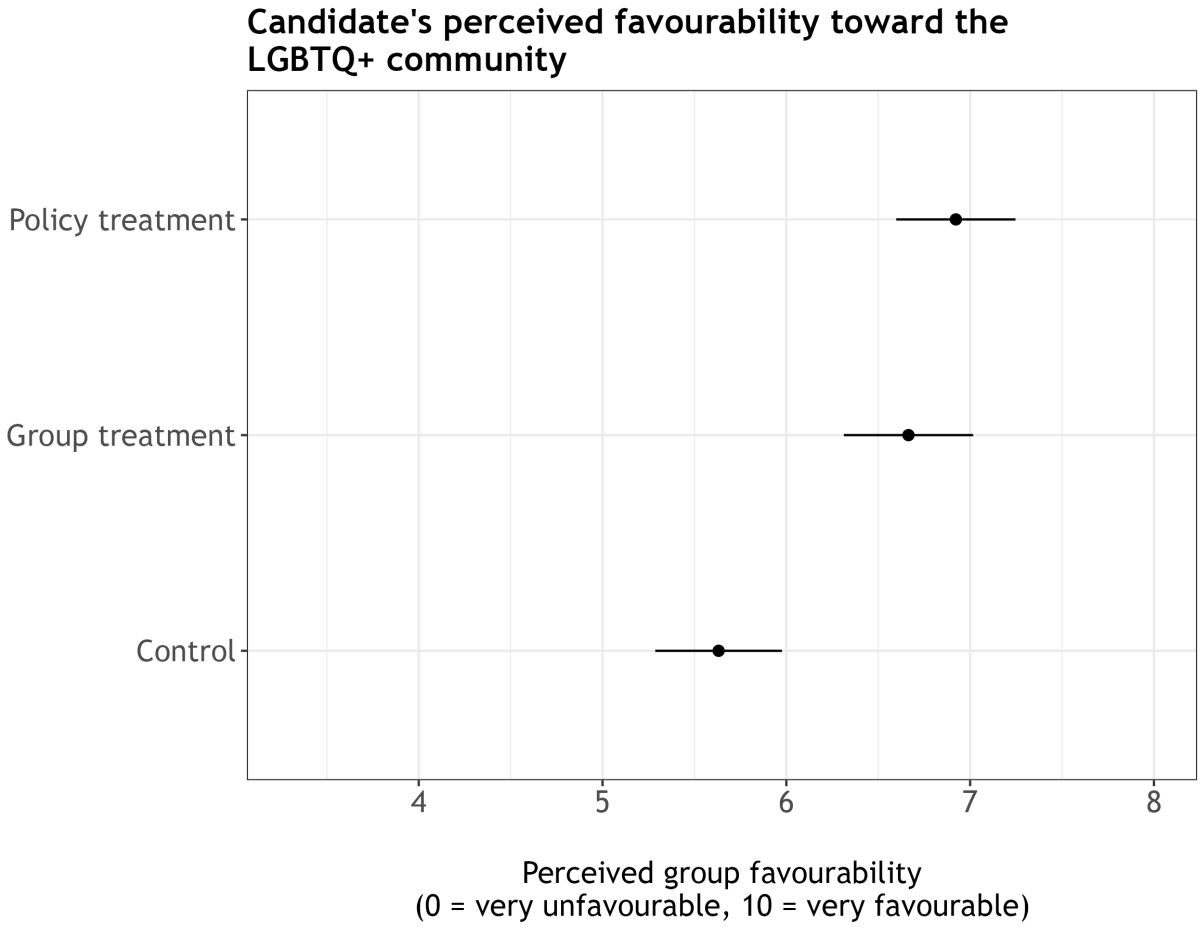

Respondents' affective evaluation of candidate
Conditional on respondent's group favourability
Control
Group treatment
Policy treatment
Affective evaluation of candidate
(0 = dislike a great deal, 10 = like a great deal)
0
1
2
3
4
5
6
7
8
9
10
0
2
4
6
8
10
Respondent's group favourability
(0 = really dislike, 10 = really like)

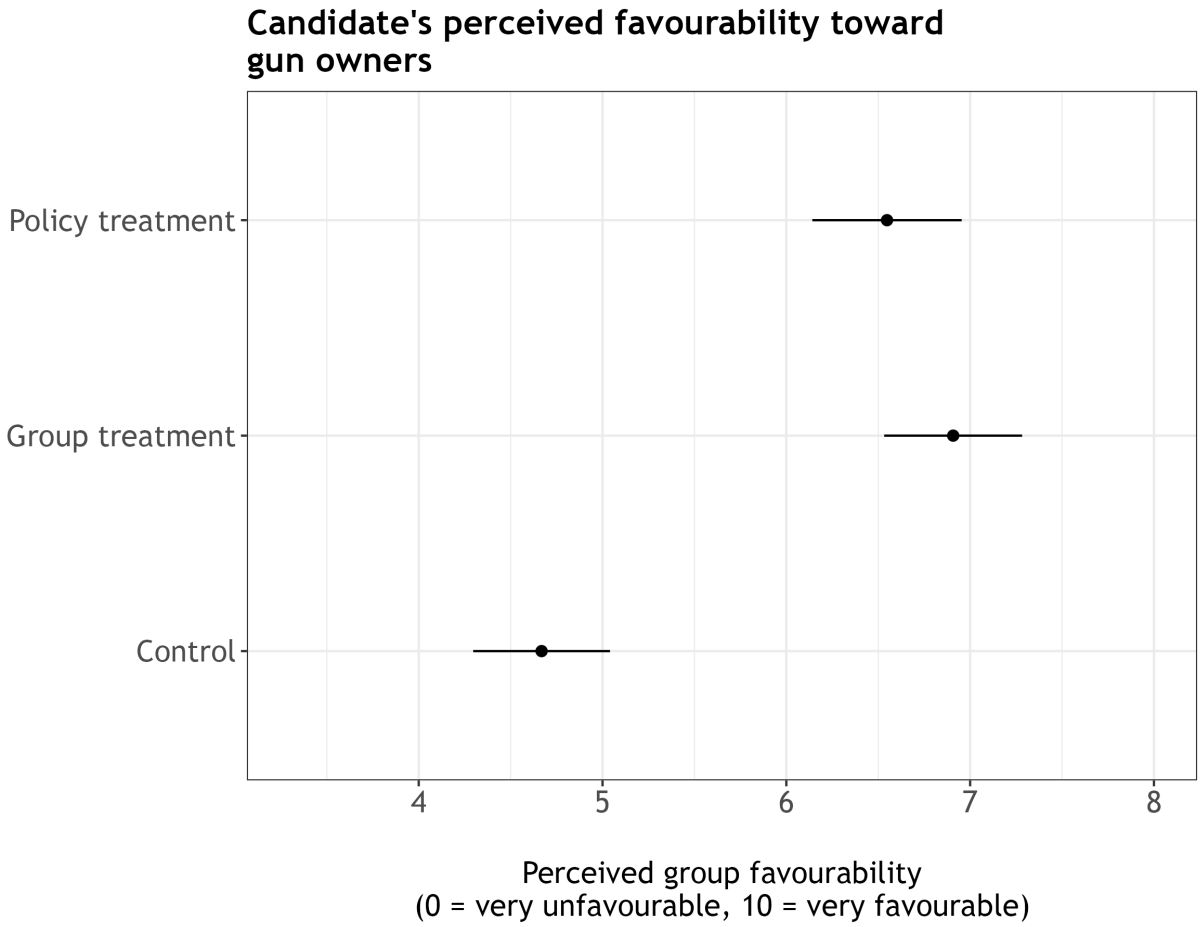
	H1a & H2a	H1b & H2b	H3a & H3b	H4a & H4b
Condition: group treatment	1.726 (0.143)	0.536 (0.144)	-1.271 (0.347)	-3.294 (0.272)
Condition: policy treatment	1.781 (0.144)	0.689 (0.159)	-2.276 (0.360)	-3.272 (0.286)
Respondent's support for policy			0.015 (0.051)	
Condition: group treatment × Respondent's support for policy			0.319 (0.100)	
Condition: policy treatment × Respondent's support for policy			0.573 (0.099)	
Respondent's group attitude (FT score)				0.051 (0.026)
Condition: group treatment × Respondent's group attitude (FT score)				0.526 (0.040)
Condition: policy treatment × Respondent's group attitude (FT score)				0.496 (0.042)
Region: British Columbia	-0.356 (0.200)	-0.337 (0.201)	-0.239 (0.188)	
Education: secondary or less	-0.096 (0.195)	0.016 (0.201)	0.126 (0.213)	
Education: university graduate	0.149 (0.157)	0.093 (0.153)	0.031 (0.159)	
(Intercept)	5.201 (0.135)	5.330 (0.137)	5.512 (0.203)	5.275 (0.172)
Observations	1584	1584	1584	1584
R^2	0.119	0.015	0.064	0.349
RMSE	2.32	2.65	2.37	1.97

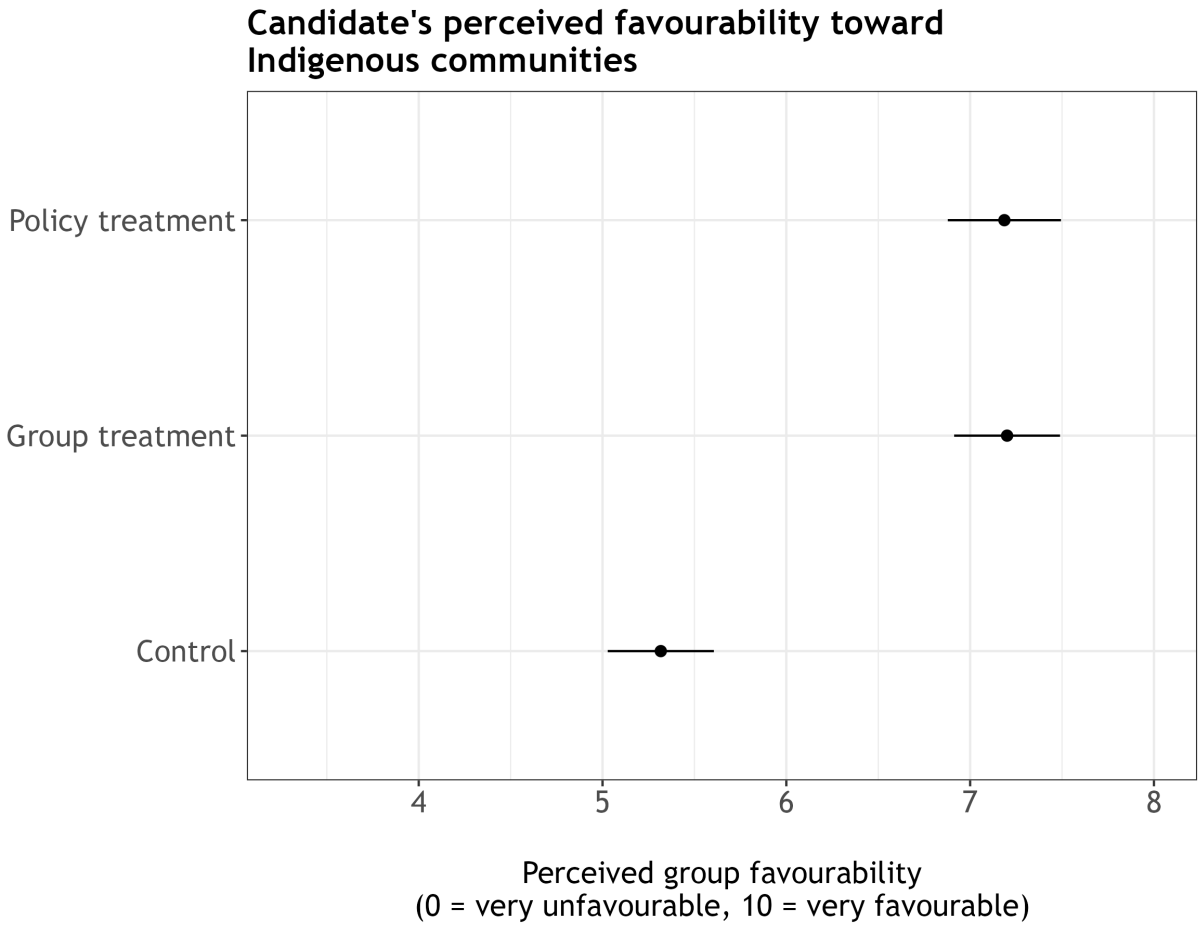
Table 3.3*: Entries are unstandardized OLS coefficients with standard-errors clustered at the respondent-level in parentheses.*

F - Separate model results – without covariate adjustment

H1a & H2a



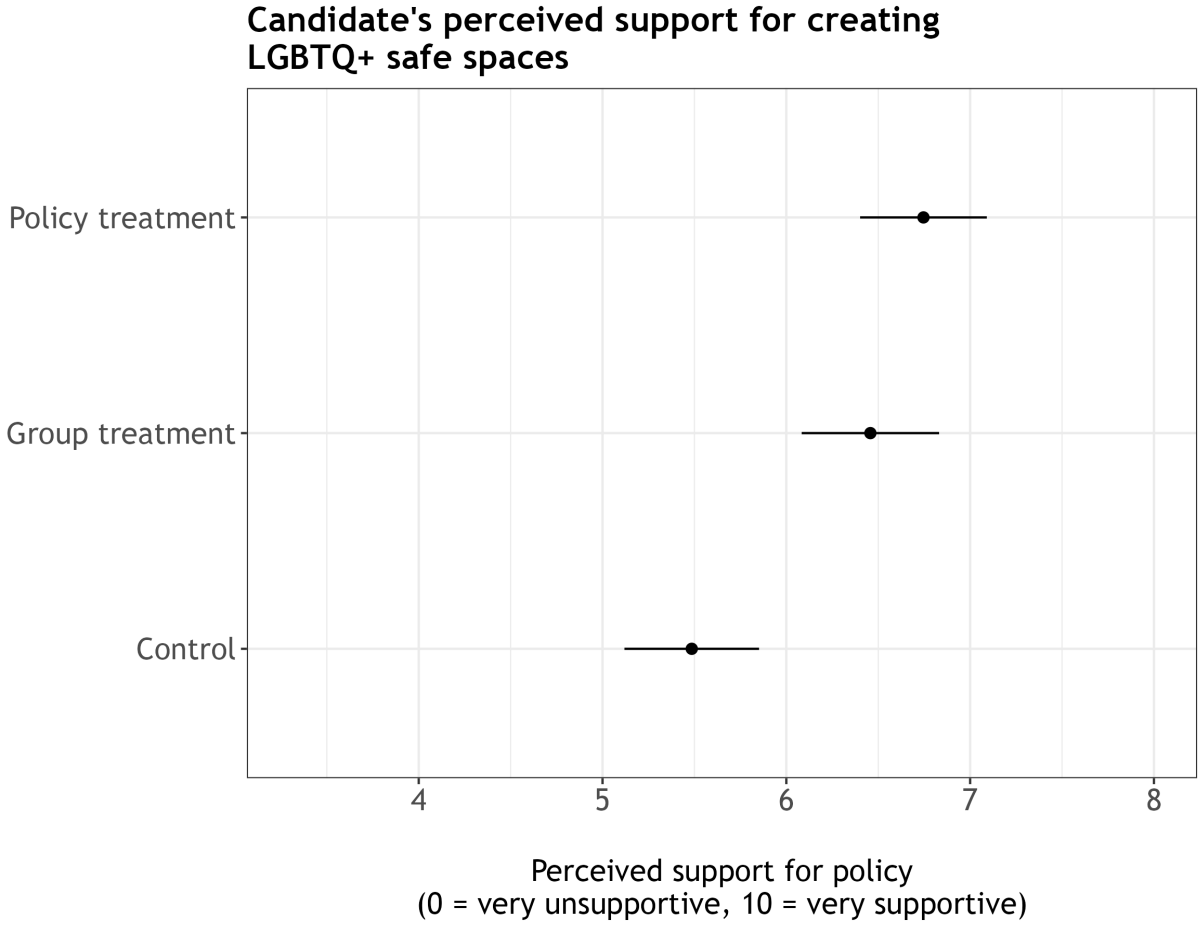

Candidate's perceived favourability toward gun owners
Policy treatment
Group treatment
Control
4
5
6
7
8
Perceived group favourability
(0 = very unfavourable, 10 = very favourable)

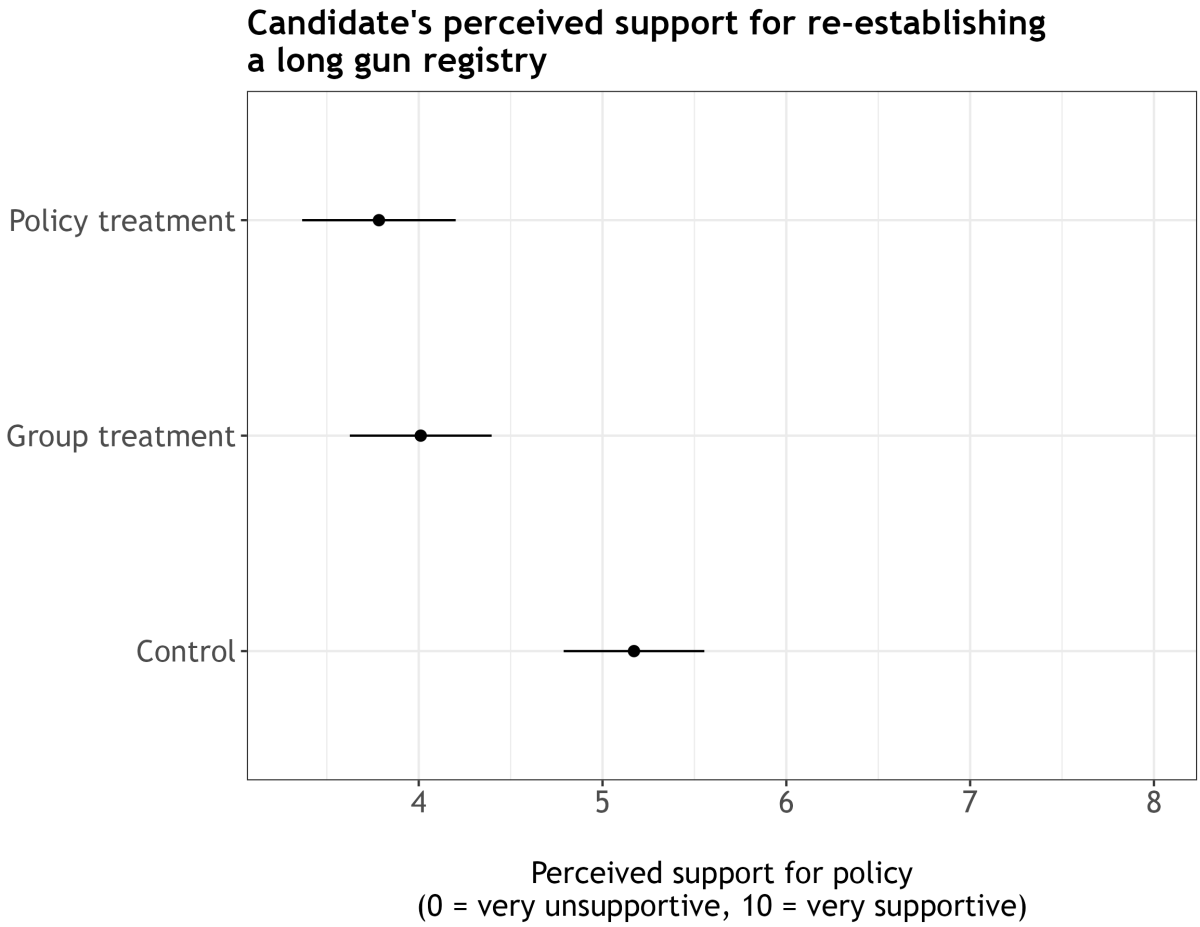

Candidate's perceived favourability toward Indigenous communities
Policy treatment
Group treatment
Control
4
5
6
7
8
Perceived group favourability
(0 = very unfavourable, 10 = very favourable)

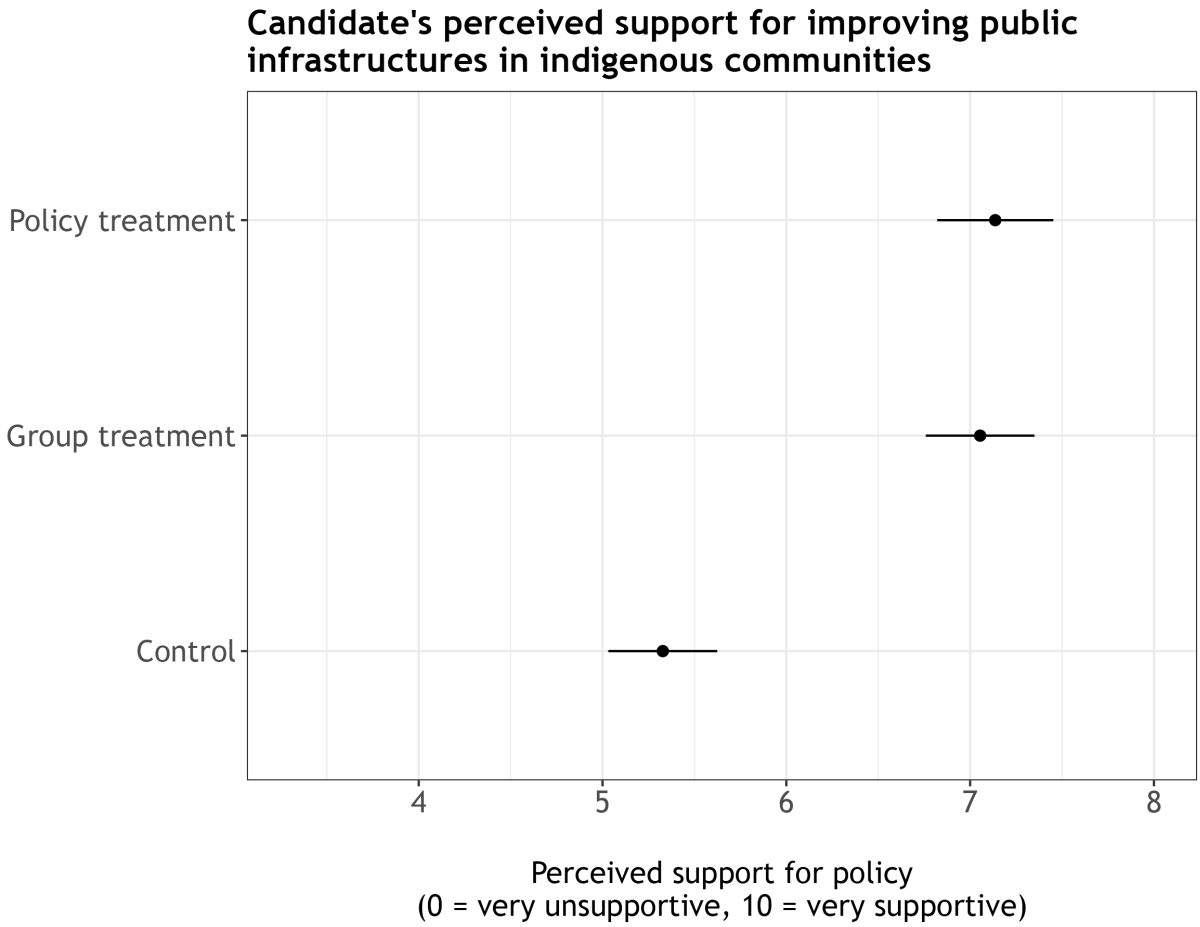
	LGBTQ+	Gun owners	Indigenous
Vignette 1 - condition: group treatment	1.033 (0.251)		
Vignette 1 - condition: policy treatment	1.291 (0.241)		
Vignette 3 - condition: group treatment		2.239 (0.270)	
Vignette 3 - condition: policy treatment		1.879 (0.281)	
Vignette 4 - condition: group treatment			1.884 (0.208)
Vignette 4 - condition: policy treatment			1.869 (0.215)
(Intercept)	5.632 (0.176)	4.668 (0.190)	5.317 (0.147)
Observations	528	528	528
R^2	0.056	0.130	0.168
RMSE	2.29	2.59	1.99

Table 3.4*: Entries are unstandardized OLS coefficients, with standard-errors in parentheses.*

H1b & H2b


Candidate's perceived support for creating LGBTQ+ safe spaces
Policy treatment
Group treatment
Control
4
5
6
7
8
Perceived support for policy
(0 = very unsupportive, 10 = very supportive)

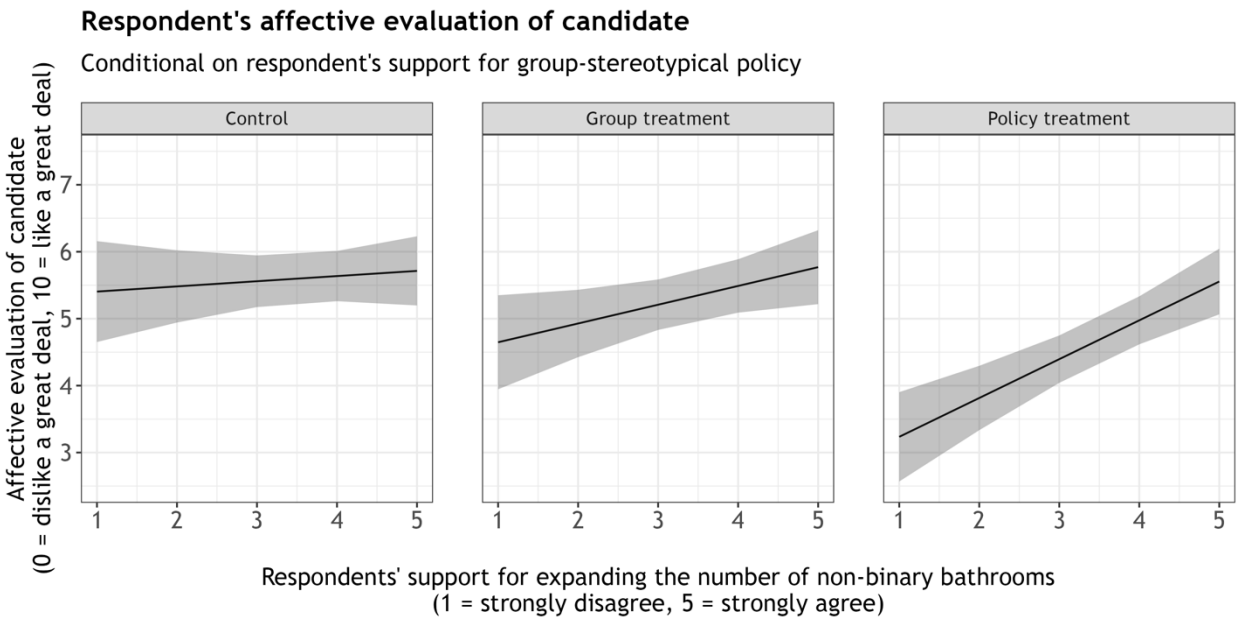

Candidate's perceived support for re-establishing a long gun registry
Policy treatment
Group treatment
Control
4
5
6
7
8
Perceived support for policy
(0 = very unsupportive, 10 = very supportive)

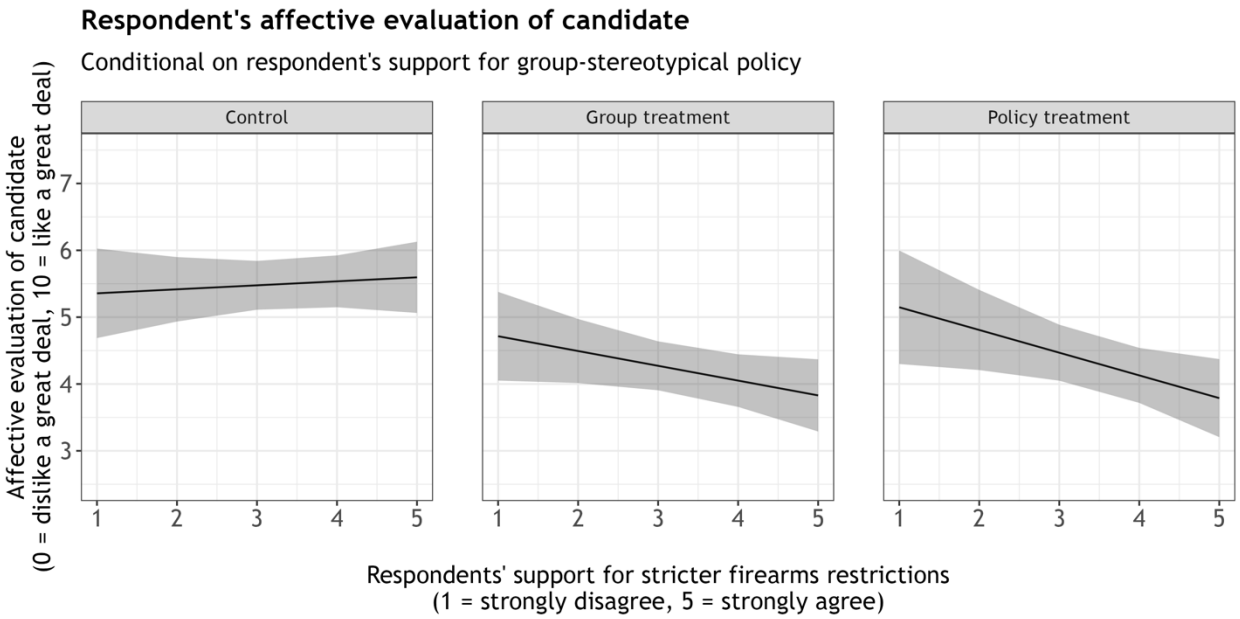

Candidate's perceived support for improving public infrastructures in indigenous communities
Policy treatment
Group treatment
Control
4
5
6
7
8
Perceived support for policy
(0 = very unsupportive, 10 = very supportive)

	LGBTQ+	Gun owners	Indigenous
Vignette 1 - condition: group treatment	0.972 (0.267)		
Vignette 1 - condition: policy treatment	1.261 (0.257)		
Vignette 3 - condition: group treatment		-1.160 (0.277)	
Vignette 3 - condition: policy treatment		-1.388 (0.289)	
Vignette 4 - condition: group treatment			1.726 (0.214)
Vignette 4 - condition: policy treatment			1.809 (0.221)
(Intercept)	5.485 (0.187)	5.171 (0.195)	5.328 (0.151)
Observations	528	528	528
R^2	0.047	0.050	0.145
RMSE	2.44	2.66	2.04

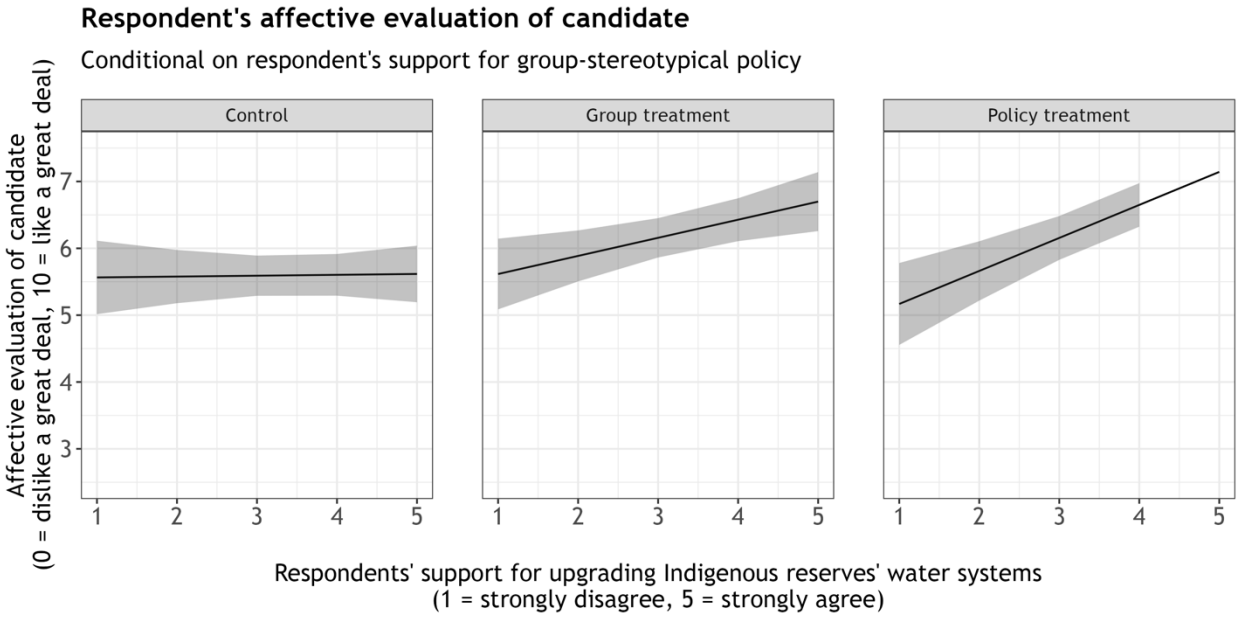
Table 3.5*: Entries are unstandardized OLS coefficients, with standard-errors in parentheses.*

H3a & H3b





Pattern differs for the above vignette considering that a negative example was used, i.e., respondents' support for stricter firearms restrictions was used as policy preference, whereas the vignette mentioned candidate's support for gun owners (group treatment) or opposition to stricter firearms restrictions (policy treatment).


Respondent's affective evaluation of candidate
Conditional on respondent's support for group-stereotypical policy
Control
Group treatment
Policy treatment
Affective evaluation of candidate
(0 = dislike a great deal, 10 = like a great deal)
3
4
5
6
7
1
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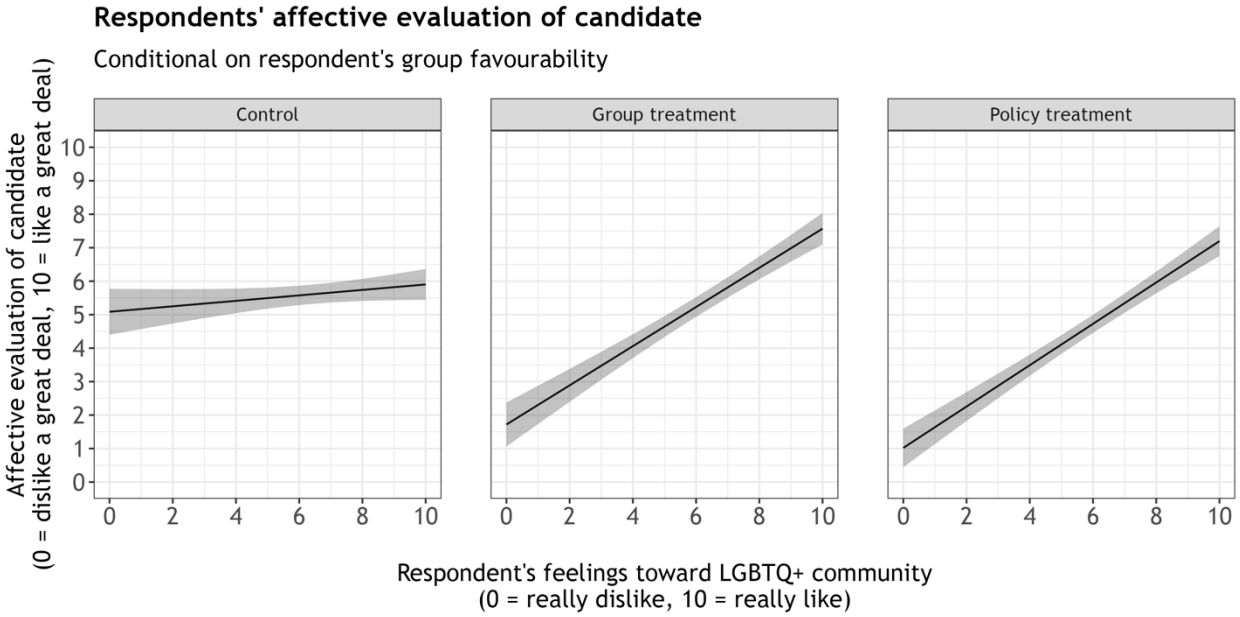
3
4
5
Respondents' support for upgrading Indigenous reserves' water systems
(1 = strongly disagree, 5 = strongly agree)

	LGBTQ+	Gun owners	Indigenous
Vignette 1 - condition: group treatment	-0.960 (0.692)		
Vignette 1 - condition: policy treatment	-2.672 (0.674)		
Policy support: expansion of non-binary bathrooms	0.077 (0.132)		
Vignette 1 - condition: group treatment × Policy support: expansion of non-binary bathrooms	0.203 (0.185)		
Vignette 1 - condition: policy treatment × Policy support: expansion of non-binary bathrooms	0.503 (0.178)		
Vignette 3 - condition: group treatment		-0.361 (0.635)	
Vignette 3 - condition: policy treatment		0.191 (0.729)	
Policy support: stricter firearms restrictions		0.060 (0.123)	
Vignette 3 - condition: group treatment × Policy support: stricter firearms restrictions		-0.281 (0.174)	
Vignette 3 - condition: policy treatment × Policy support: stricter firearms restrictions		-0.400 (0.196)	
Vignette 4 - condition: group treatment			-0.207 (0.512)
Vignette 4 - condition: policy treatment			-0.878 (0.550)
Policy support: upgrading water systems in indigenous reserves			0.013 (0.099)
Vignette 4 - condition: group treatment × Policy support: upgrading water systems in indigenous reserves			0.258 (0.140)
Vignette 4 - condition: policy treatment × Policy support: upgrading water systems in indigenous reserves			0.481 (0.146)
(Intercept)	5.327 (0.504)	5.297 (0.451)	5.551 (0.368)
Observations	528	528	528
R^2	0.077	0.071	0.079
RMSE	2.37	2.46	1.99

Table 3.6*: Entries are unstandardized OLS coefficients, with standard-errors in parentheses.*

H4a & H4b


Respondents' affective evaluation of candidate
Conditional on respondent's group favourability
Control
Group treatment
Policy treatment
Affective evaluation of candidate
(0 = dislike a great deal, 10 = like a great deal)
0
1
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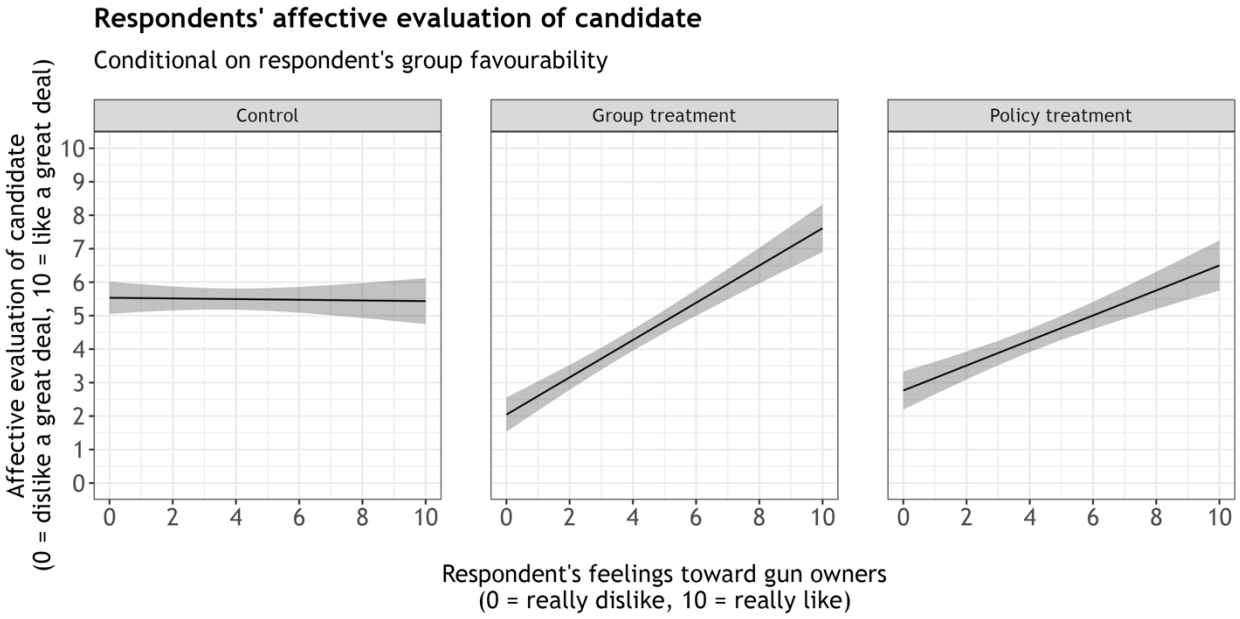
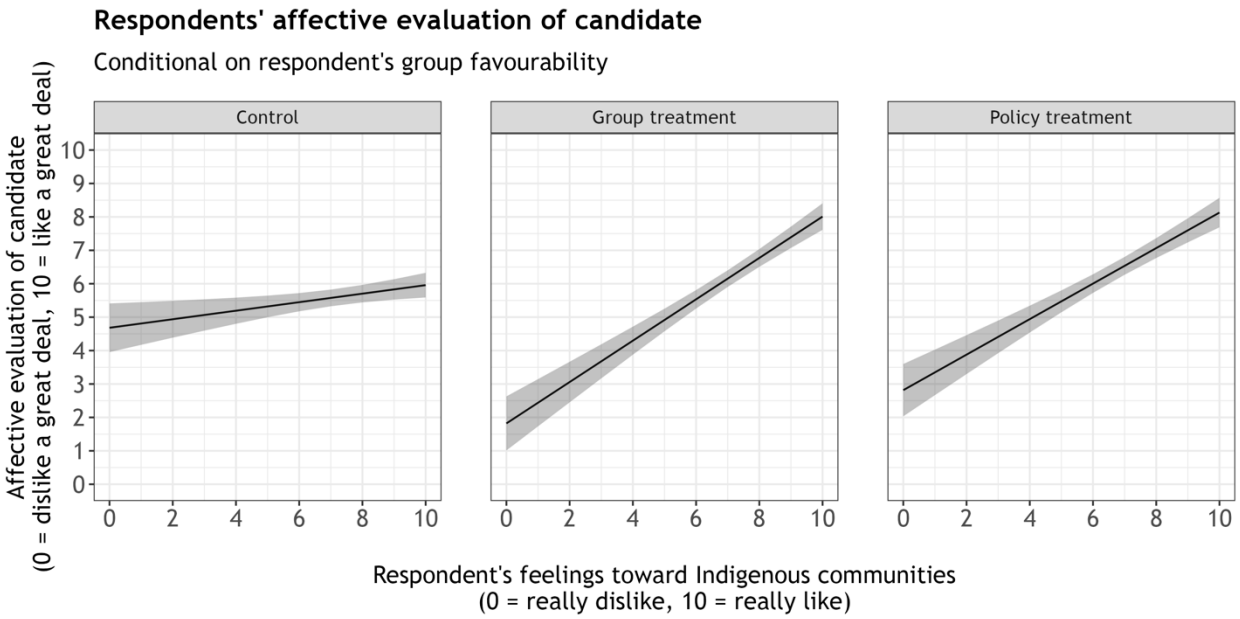
9
10
Respondent's feelings toward LGBTQ+ community
(0 = really dislike, 10 = really like)


Respondents' affective evaluation of candidate
Conditional on respondent's group favourability
Control
Group treatment
Policy treatment
Affective evaluation of candidate
(0 = dislike a great deal, 10 = like a great deal)
0
1
2
3
4
5
6
7
8
9
10
Respondent's feelings toward gun owners
(0 = really dislike, 10 = really like)

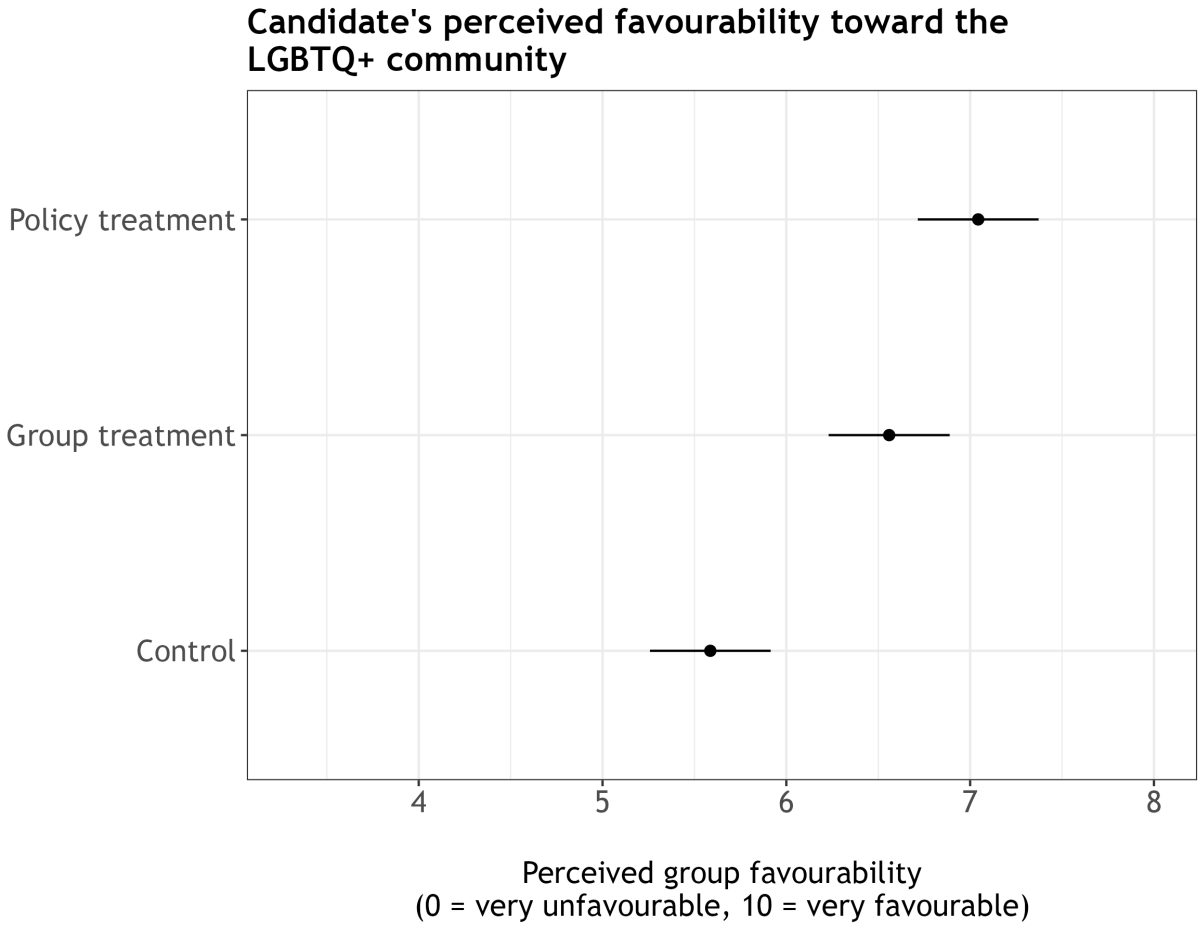

Respondents' affective evaluation of candidate
Conditional on respondent's group favourability
Control
Group treatment
Policy treatment
Affective evaluation of candidate
(0 = dislike a great deal, 10 = like a great deal)
0
1
2
3
4
5
6
7
8
9
10
0
2
4
6
8
10
Respondent's feelings toward Indigenous communities
(0 = really dislike, 10 = really like)

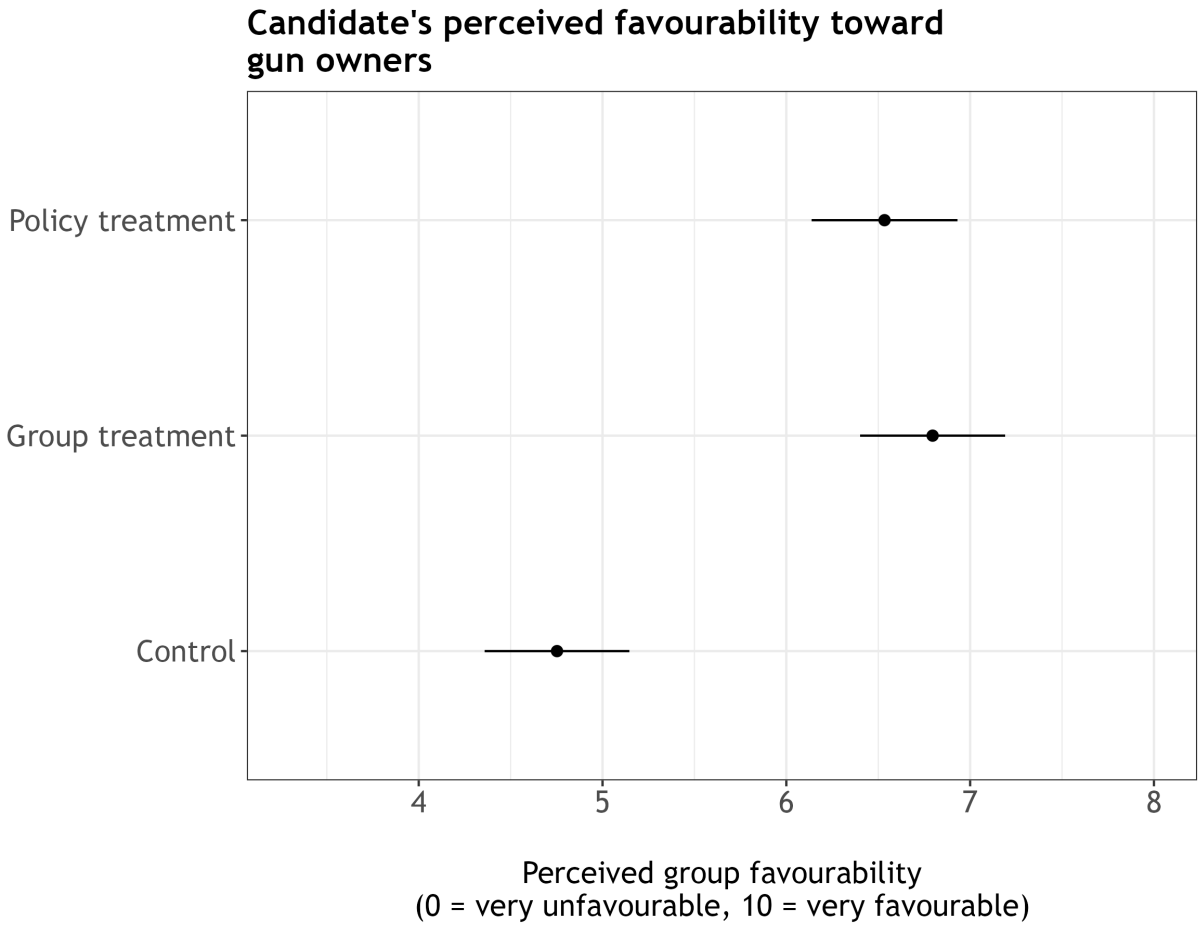
	LGBTQ+	Gun owners	Indigenous
Vignette 1 - condition: group treatment	-3.368 (0.484)		
Vignette 1 - condition: policy treatment	-4.066 (0.457)		
Respondent's group attitude (FT score): LGBTQ+	0.082 (0.050)		
Vignette 1 - condition: group treatment × Respondent's group attitude (FT score): LGBTQ+	0.504 (0.070)		
Vignette 1 - condition: policy treatment × Respondent's group attitude (FT score): LGBTQ+	0.536 (0.067)		
Vignette 3 - condition: group treatment		-3.492 (0.359)	
Vignette 3 - condition: policy treatment		-2.772 (0.381)	
Respondent's group attitude (FT score): gun owners		-0.010 (0.050)	
Vignette 3 - condition: group treatment × Respondent's group attitude (FT score): gun owners		0.567 (0.073)	
Vignette 3 - condition: policy treatment × Respondent's group attitude (FT score): gun owners		0.384 (0.076)	
Vignette 4 - condition: group treatment			-2.862 (0.555)
Vignette 4 - condition: policy treatment			-1.867 (0.545)
Respondent's group attitude (FT score): indigenous peoples			0.128 (0.049)
Vignette 4 - condition: group treatment × Respondent's group attitude (FT score): indigenous peoples			0.491 (0.074)
Vignette 4 - condition: policy treatment × Respondent's group attitude (FT score): indigenous peoples			0.404 (0.074)
(Intercept)	5.086 (0.350)	5.535 (0.246)	4.683 (0.371)
Observations	528	528	528
R^2	0.412	0.270	0.321
RMSE	1.89	2.18	1.71

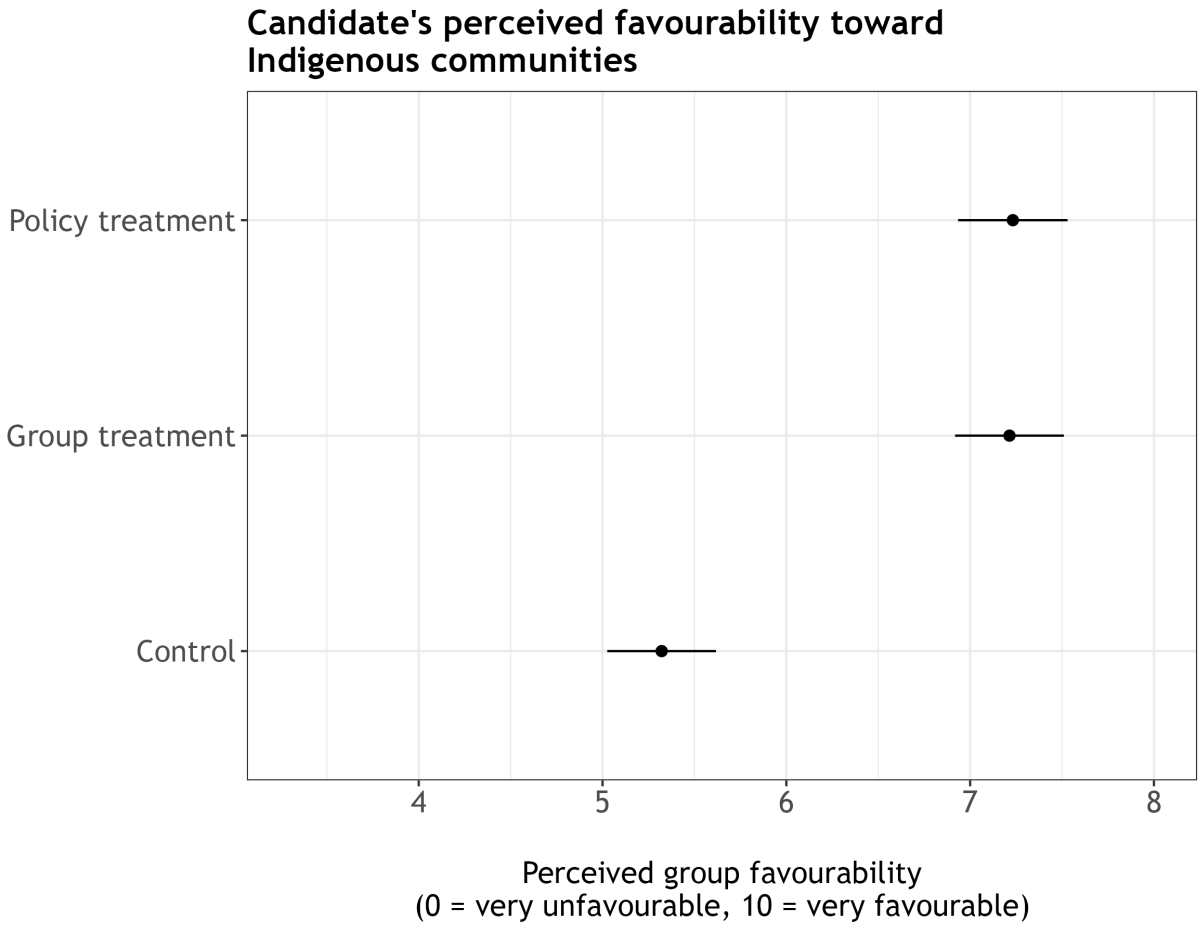
Table 3.7*: Entries are unstandardized OLS coefficients, with standard-errors in parentheses.*

G - Separate model results – with covariate adjustment

H1a & H2a




Candidate's perceived favourability toward gun owners
Policy treatment
Group treatment
Control
4
5
6
7
8
Perceived group favourability
(0 = very unfavourable, 10 = very favourable)

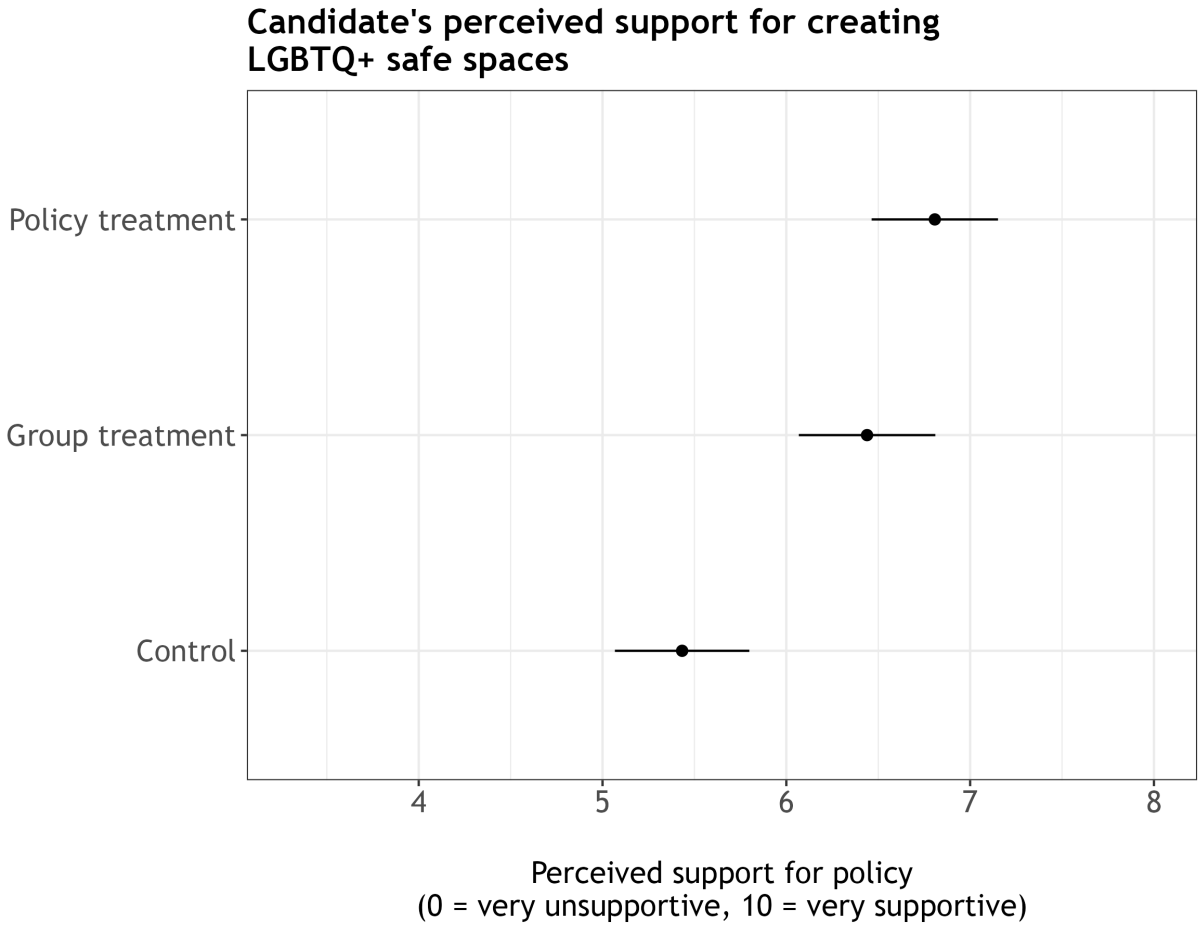

Candidate's perceived favourability toward Indigenous communities
Policy treatment
Group treatment
Control
4
5
6
7
8
Perceived group favourability
(0 = very unfavourable, 10 = very favourable)

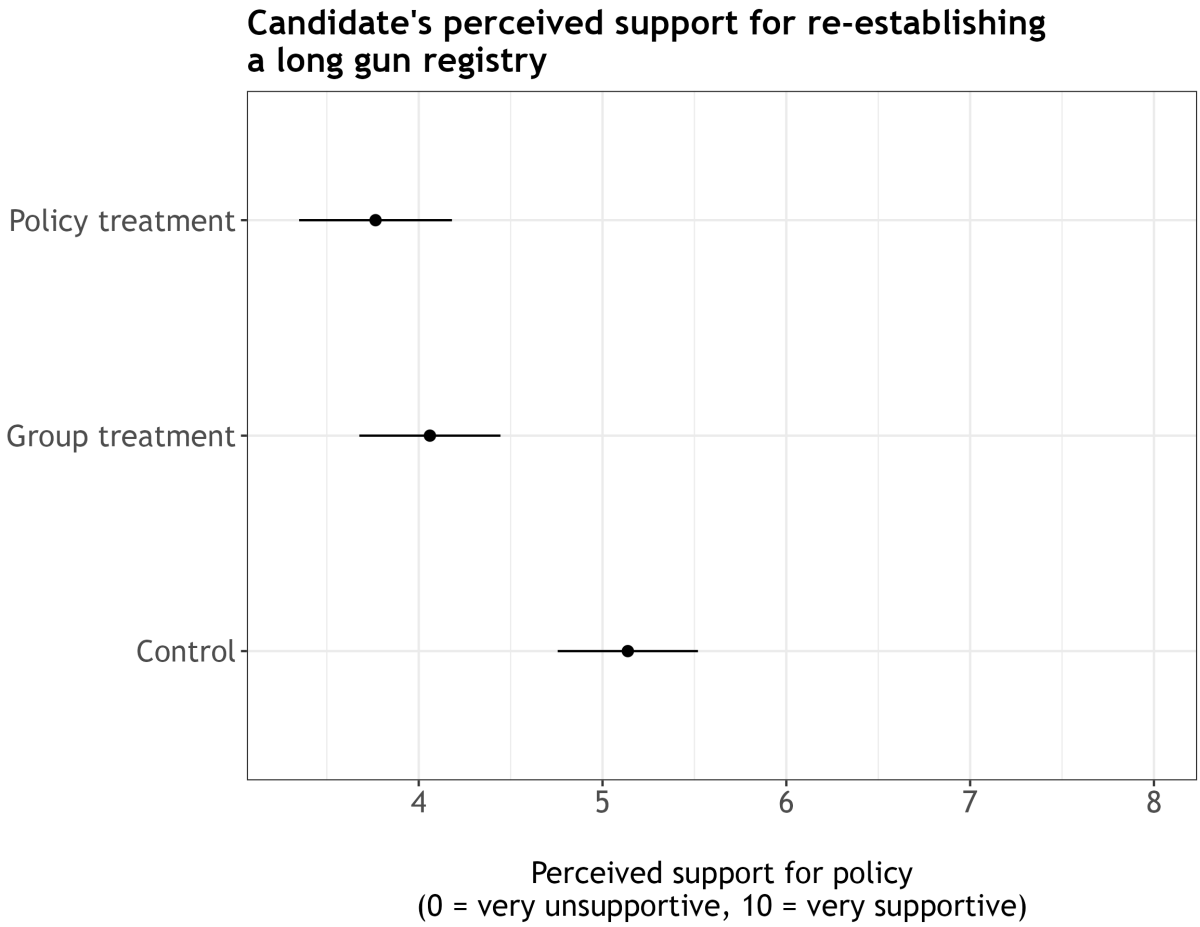
	LGBTQ+	Gun owners	Indigenous
Vignette 1 - condition: group treatment	0.973 (0.235)		
Vignette 1 - condition: policy treatment	1.457 (0.235)		
Vignette 3 - condition: group treatment		2.044 (0.280)	
Vignette 3 - condition: policy treatment		1.782 (0.282)	
Vignette 4 – condition: group treatment			1.892 (0.211)
Vignette 4 - condition: policy treatment			1.911 (0.212)
Region: Atlantic	0.302 (0.309)	1.132 (0.502)	
Region: British Columbia	-0.082 (0.277)		-0.167 (0.346)
Region: Ontario		0.233 (0.348)	0.022 (0.311)
Region: Prairies		0.545 (0.413)	0.126 (0.344)
Region: Quebec		0.157 (0.409)	
Age: 25-34		0.582 (0.395)	
Age: 35-44	0.243 (0.322)		
Age: 55-64		0.597 (0.269)	
Education: secondary or less	0.231 (0.261)		-0.276 (0.237)
Education: Technical/Community college/CEGEP/Collège classique		0.000 (0.251)	
Education: university graduate	0.376 (0.230)		-0.110 (0.203)
Language: English			-0.319 (0.364)
PID: Bloc Québécois		0.587 (0.639)	
PID: Conservative	-0.374 (0.252)		-0.774 (0.329)
PID: Liberal	0.286 (0.229)	-0.427 (0.320)	-0.145 (0.343)
PID: NDP		0.403 (0.396)	-0.256 (0.342)
PID: other	-0.060 (0.549)	0.536 (0.557)	
PID: none		-0.516 (0.330)	-0.612 (0.346)
Born in Canada	0.508 (0.300)		-0.450 (0.293)
(Intercept)	4.909 (0.373)	4.295 (0.402)	6.518 (0.430)

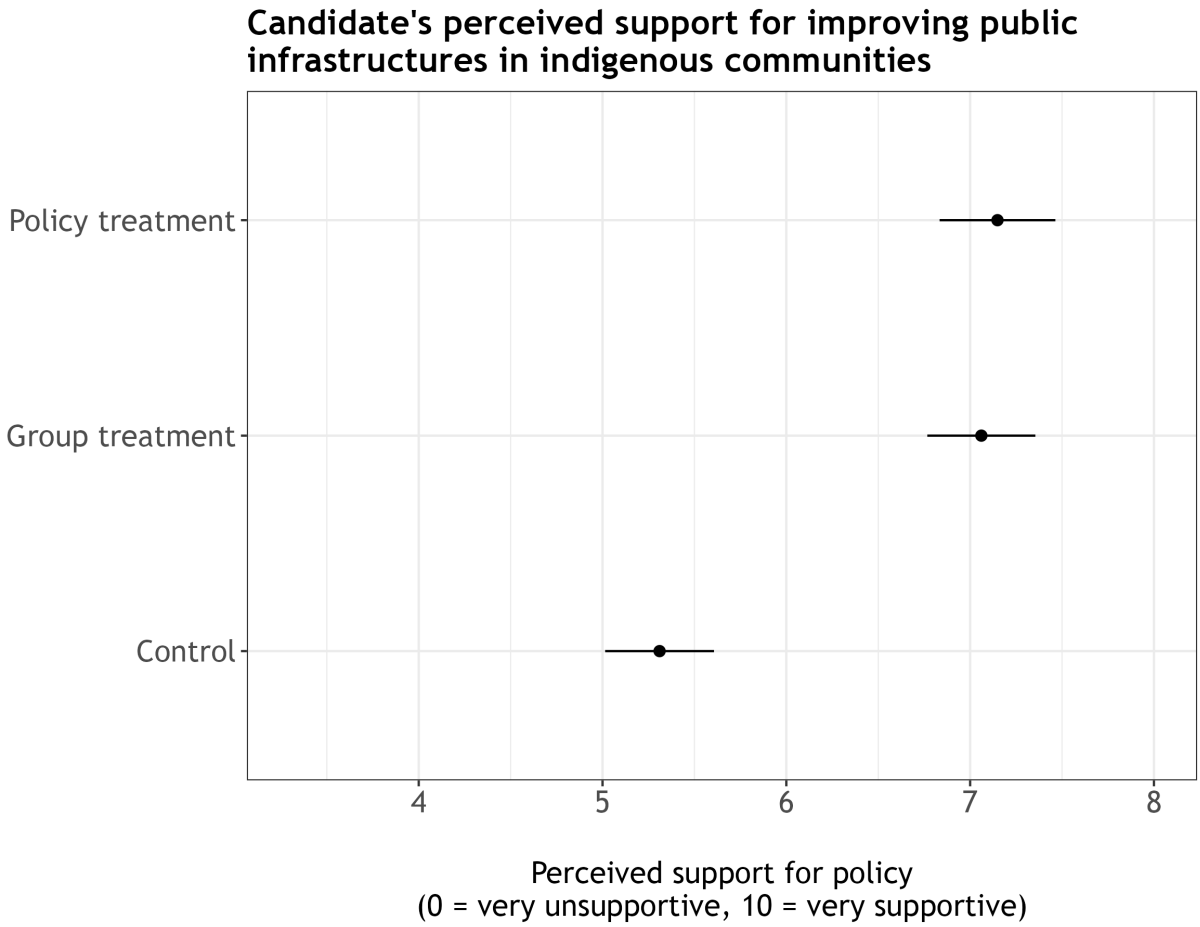
	LGBTQ+	Gun owners	Indigenous
Observations	528	528	528
R^2	0.095	0.143	0.199
RMSE	2.27	2.55	1.96

Table 3.8*: Entries are unstandardized OLS coefficients, with standard-errors in parentheses.*

H1b & H2b




Candidate's perceived support for re-establishing a long gun registry
Policy treatment
Group treatment
Control
4
5
6
7
8
Perceived support for policy
(0 = very unsupportive, 10 = very supportive)

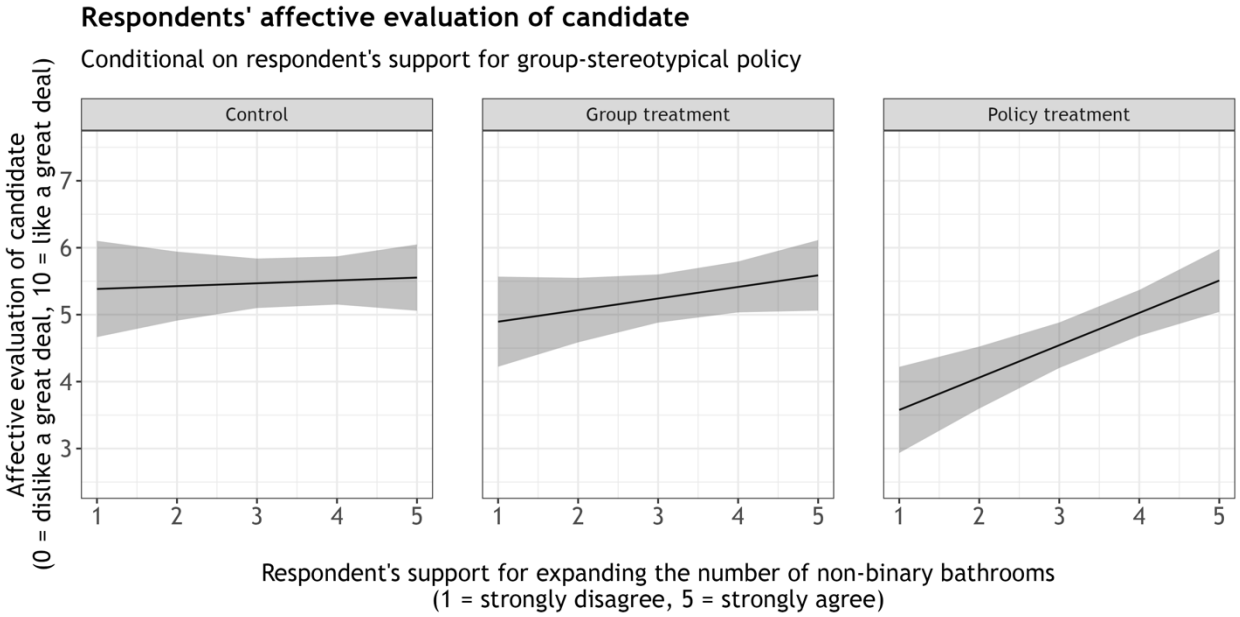

Candidate's perceived support for improving public infrastructures in indigenous communities
Policy treatment
Group treatment
Control
4
5
6
7
8
Perceived support for policy
(0 = very unsupportive, 10 = very supportive)

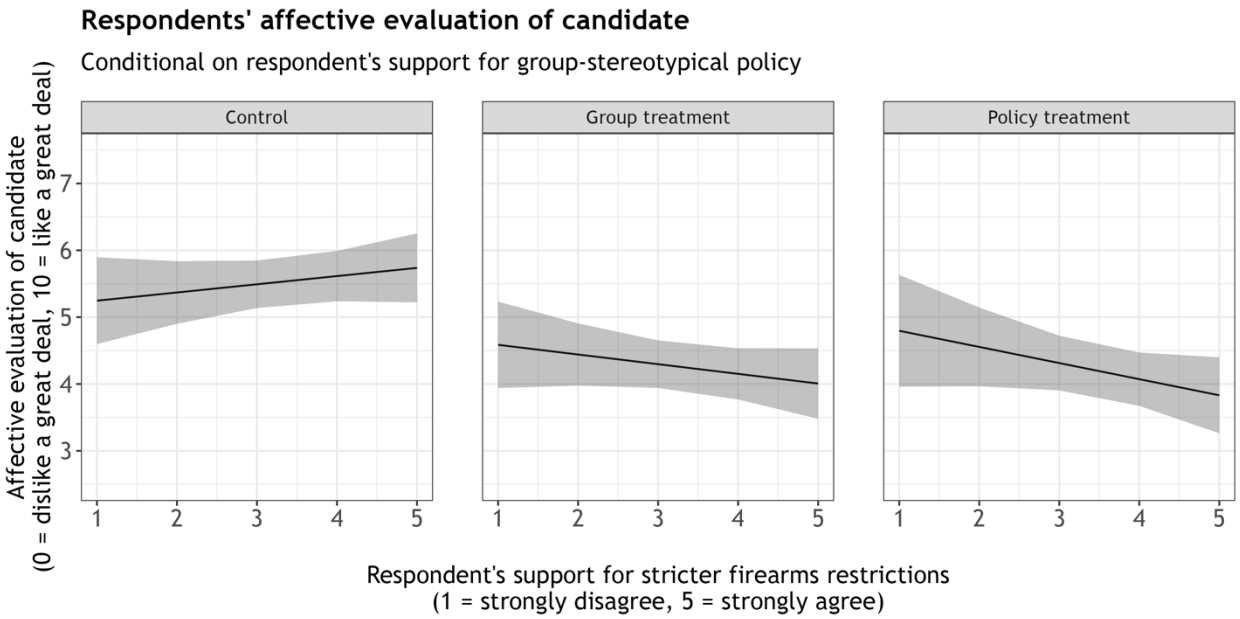
	LGBTQ+	Gun owners	Indigenous
Vignette 1 - condition: group treatment	1.006 (0.267)		
Vignette 1 - condition: policy treatment	1.375 (0.258)		
Vignette 3 - condition: group treatment		-1.077 (0.278)	
Vignette 3 - condition: policy treatment		-1.373 (0.290)	
Vignette 4 - condition: group treatment			1.751 (0.214)
Vignette 4 - condition: policy treatment			1.838 (0.222)
Age: 25-34		1.168 (0.348)	
Age: 35-44	0.347 (0.336)		
Age: 55-64		-0.100 (0.277)	
Born in Canada	0.476 (0.320)		-0.268 (0.271)
Education: secondary or less	0.138 (0.304)		-0.039 (0.255)
Education: Technical/Community college/CEGEP/Collège classique		0.373 (0.253)	
Education: university graduate	0.408 (0.244)		0.039 (0.204)
Language: English			-0.516 (0.359)
PID: Bloc Québécois		-0.907 (0.636)	
PID: Conservative	-0.726 (0.258)		-0.597 (0.349)
PID: Liberal	0.281 (0.270)	-0.137 (0.325)	0.090 (0.354)
PID: NDP		-1.127 (0.358)	0.156 (0.370)
PID: Other	-0.066 (0.513)	-0.271 (0.575)	
PID: none		-0.100 (0.334)	-0.364 (0.349)
Region: Atlantic	0.309 (0.357)	0.329 (0.449)	
Region: British Columbia	-0.045 (0.273)		-0.417 (0.320)
Region: Ontario		0.448 (0.326)	-0.042 (0.290)
Region: Prairies		-0.172 (0.375)	-0.327 (0.322)
Region: Quebec		0.324 (0.434)	
(Intercept)	4.863 (0.400)	4.973 (0.383)	6.327 (0.433)

	LGBTQ+	Gun owners	Indigenous
Observations	528	528	528
R^2	0.084	0.102	0.185
RMSE	2.39	2.59	1.99

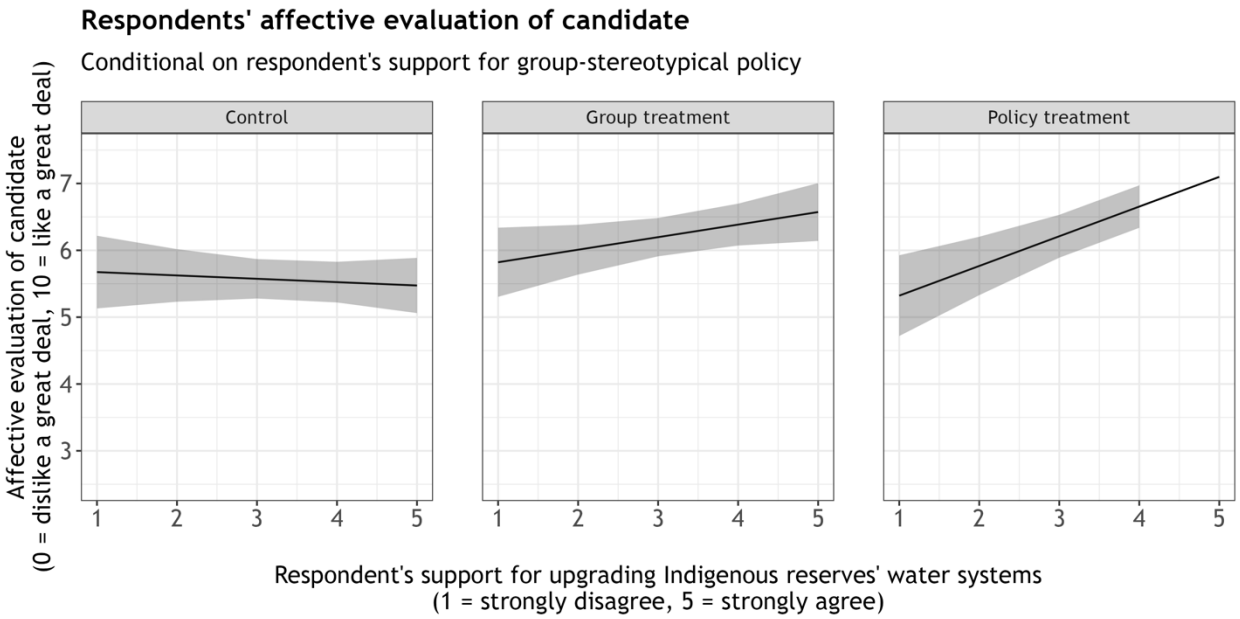
Table 3.9*: Entries are unstandardized OLS coefficients, with standard-errors in parentheses.*

H3a & H3b





Pattern differs for the above vignette considering that a negative example was used, i.e., respondents' support for stricter firearms restrictions was used as policy preference, whereas the vignette mentioned candidate's support for gun owners (group treatment) or opposition to stricter firearms restrictions (policy treatment).

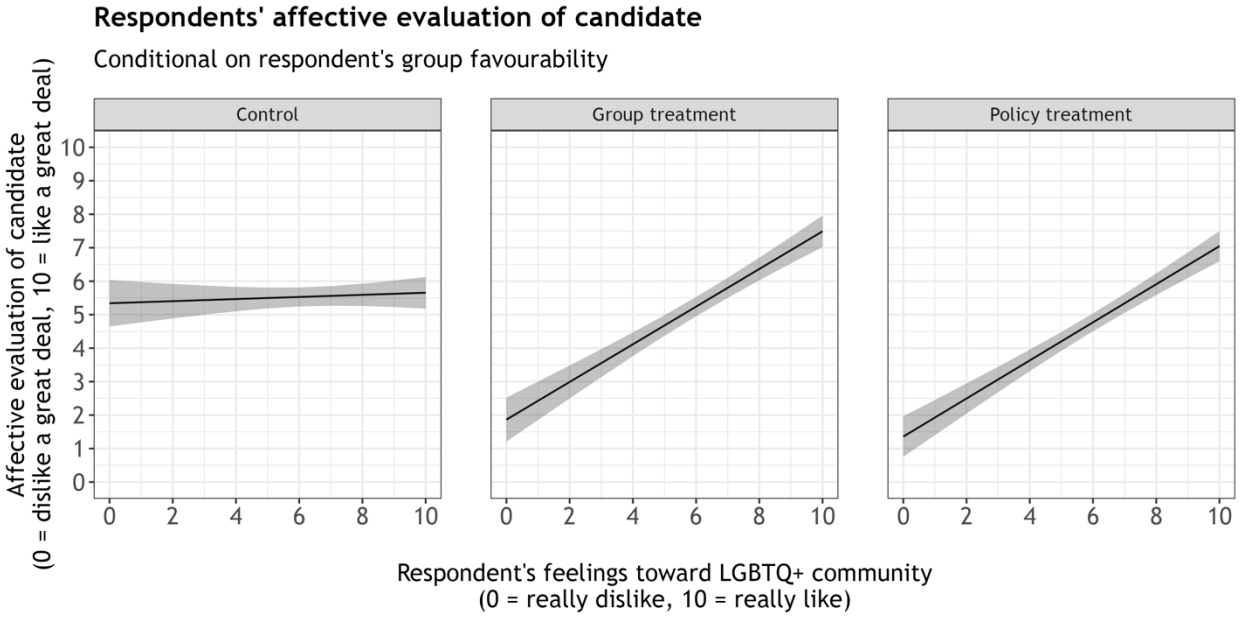

Respondents' affective evaluation of candidate
Conditional on respondent's support for group-stereotypical policy
Control
Group treatment
Policy treatment
Affective evaluation of candidate
(0 = dislike a great deal, 10 = like a great deal)
7
6
5
4
3
1
2
3
4
5
Respondent's support for upgrading Indigenous reserves' water systems
(1 = strongly disagree, 5 = strongly agree)

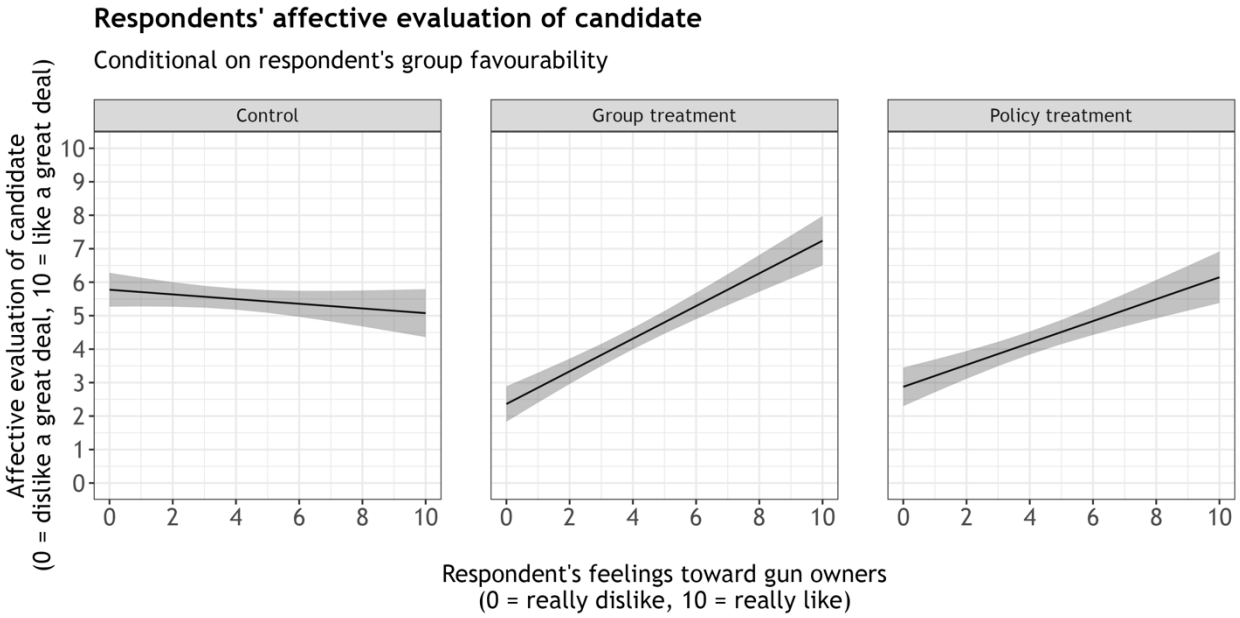
	LGBTQ+	Gun owners	Indigenous
Vignette 1 - condition: group treatment	-0.619 (0.661)		
Vignette 1 - condition: policy treatment	-2.247 (0.647)		
Policy support: expansion of non-binary bathrooms	0.042 (0.126)		
Vignette 1 - condition: group treatment × Policy support: expansion of non-binary bathrooms	0.131 (0.176)		
Vignette 1 - condition: policy treatment × Policy support: expansion of non-binary bathrooms	0.441 (0.170)		
Vignette 3 - condition: group treatment		-0.393 (0.616)	
Vignette 3 - condition: policy treatment		-0.087 (0.710)	
Policy support: stricter firearms restrictions		0.123 (0.119)	
Vignette 3 - condition: group treatment × Policy support: stricter firearms restrictions		-0.267 (0.168)	
Vignette 3 - condition: policy treatment × Policy support: stricter firearms restrictions		-0.364 (0.190)	
Vignette 4 - condition: group treatment			-0.091 (0.502)
Vignette 4 - condition: policy treatment			-0.847 (0.549)
Policy support: upgrading water systems in indigenous reserves			-0.050 (0.097)
Vignette 4 - condition: group treatment × Policy support: upgrading water systems in indigenous reserves			0.238 (0.136)
Vignette 4 - condition: policy treatment × Policy support: upgrading water systems in indigenous reserves			0.494 (0.145)
Age: 25-34		0.567 (0.315)	
Age: 35-44	0.391 (0.316)		
Age: 55-64		-0.210 (0.251)	
Born in Canada	0.271 (0.301)		-0.207 (0.261)
Education: secondary or less	0.073 (0.285)		0.092 (0.247)
Education: Technical/Community college/CEGEP/Collège classique		0.112 (0.229)	

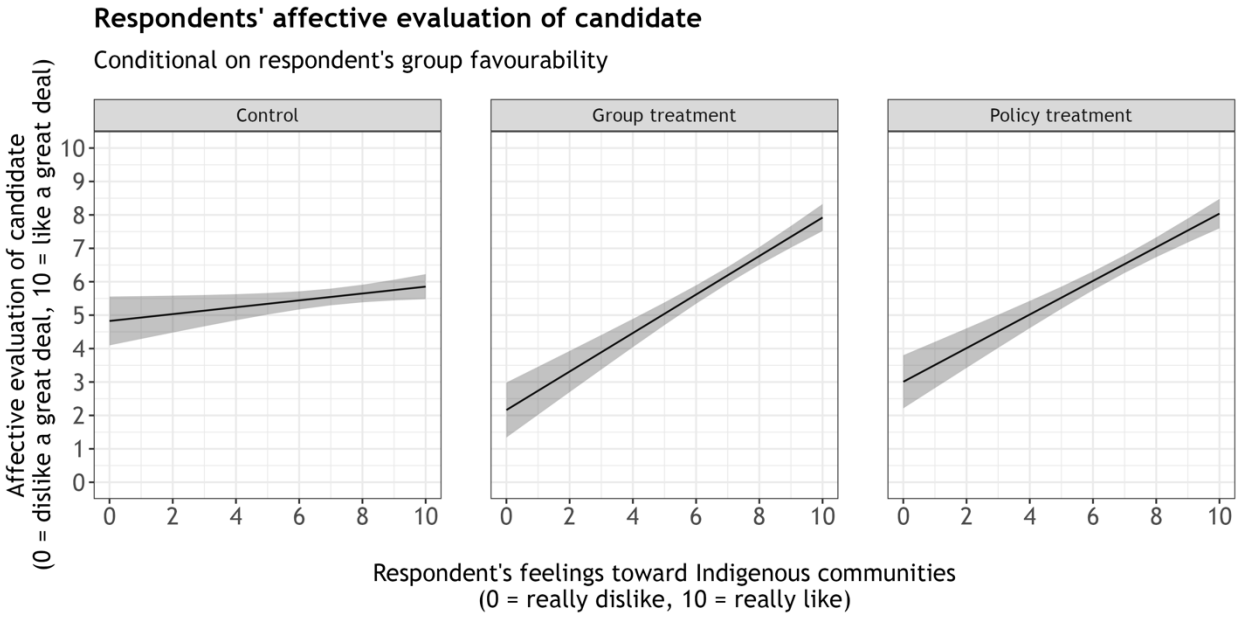
	LGBTQ+	Gun owners	Indigenous
Education: university graduate	0.067 (0.229)		0.185 (0.196)
Language: English			-0.487 (0.346)
PID: Bloc Québécois		-0.397 (0.581)	
PID: Conservative	-1.545 (0.245)		-0.874 (0.335)
PID: Liberal	0.532 (0.253)	-1.146 (0.299)	0.018 (0.339)
PID: NDP		-2.103 (0.327)	0.463 (0.355)
PID: Other	-0.708 (0.481)	-0.515 (0.525)	
PID: none		-1.028 (0.306)	-0.657 (0.335)
Region: Atlantic	0.165 (0.335)	0.001 (0.407)	
Region: British Columbia	0.000 (0.256)		-0.376 (0.308)
Region: Ontario		-0.029 (0.296)	0.200 (0.280)
Region: Prairies		0.604 (0.340)	-0.177 (0.309)
Region: Quebec		-0.150 (0.394)	
(Intercept)	5.317 (0.566)	5.888 (0.514)	6.550 (0.523)
Observations	528	528	528
R^2	0.182	0.164	0.159
RMSE	2.23	2.33	1.90

Table 3.10*: Entries are unstandardized OLS coefficients, with standard-errors in parentheses.*

H4a & H4b


Respondents' affective evaluation of candidate
Conditional on respondent's group favourability
Control
Group treatment
Policy treatment
Affective evaluation of candidate
(0 = dislike a great deal, 10 = like a great deal)
Respondent's feelings toward LGBTQ+ community
(0 = really dislike, 10 = really like)


Respondents' affective evaluation of candidate
Conditional on respondent's group favourability
Control
Group treatment
Policy treatment
Affective evaluation of candidate
(0 = dislike a great deal, 10 = like a great deal)
Respondent's feelings toward gun owners
(0 = really dislike, 10 = really like)

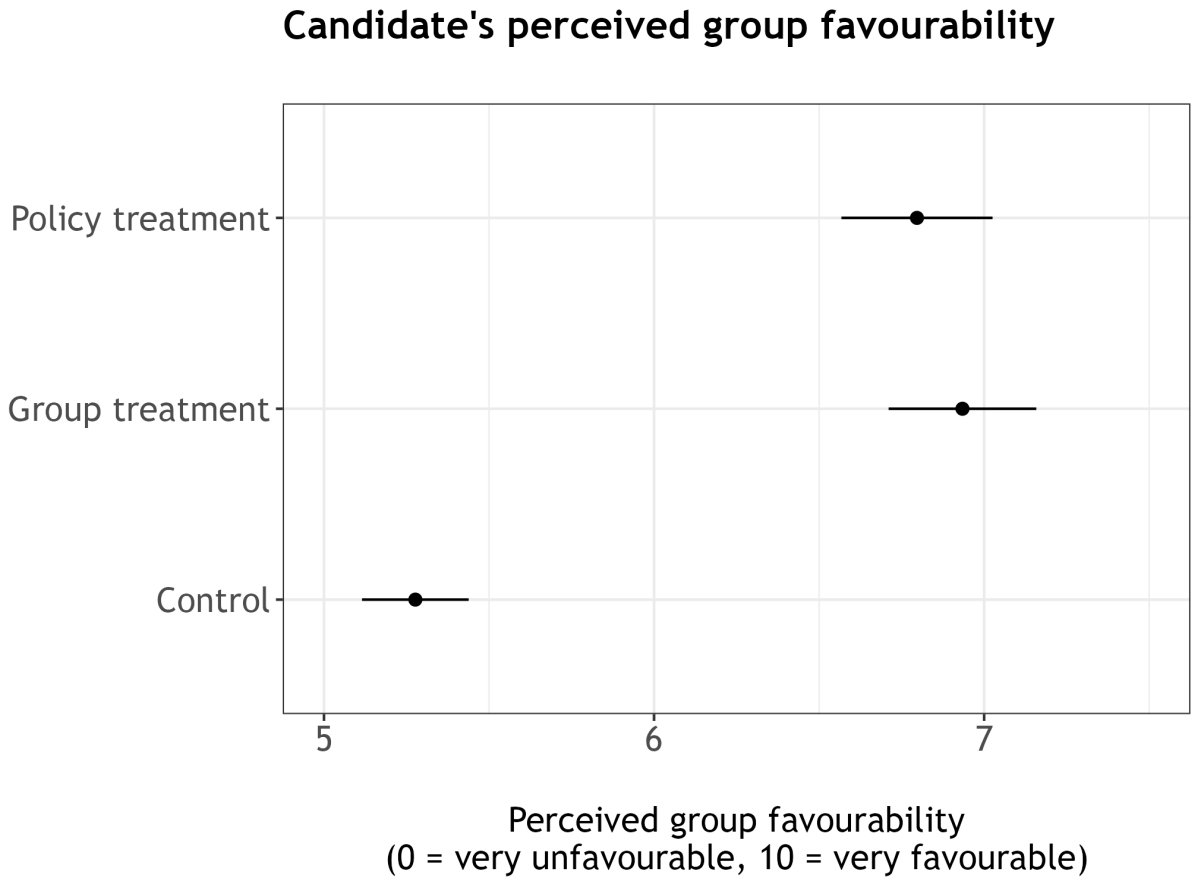

Respondents' affective evaluation of candidate
Conditional on respondent's group favourability
Control
Group treatment
Policy treatment
Affective evaluation of candidate
(0 = dislike a great deal, 10 = like a great deal)
0
1
2
3
4
5
6
7
8
9
10
0
2
4
6
8
10
Respondent's feelings toward Indigenous communities
(0 = really dislike, 10 = really like)

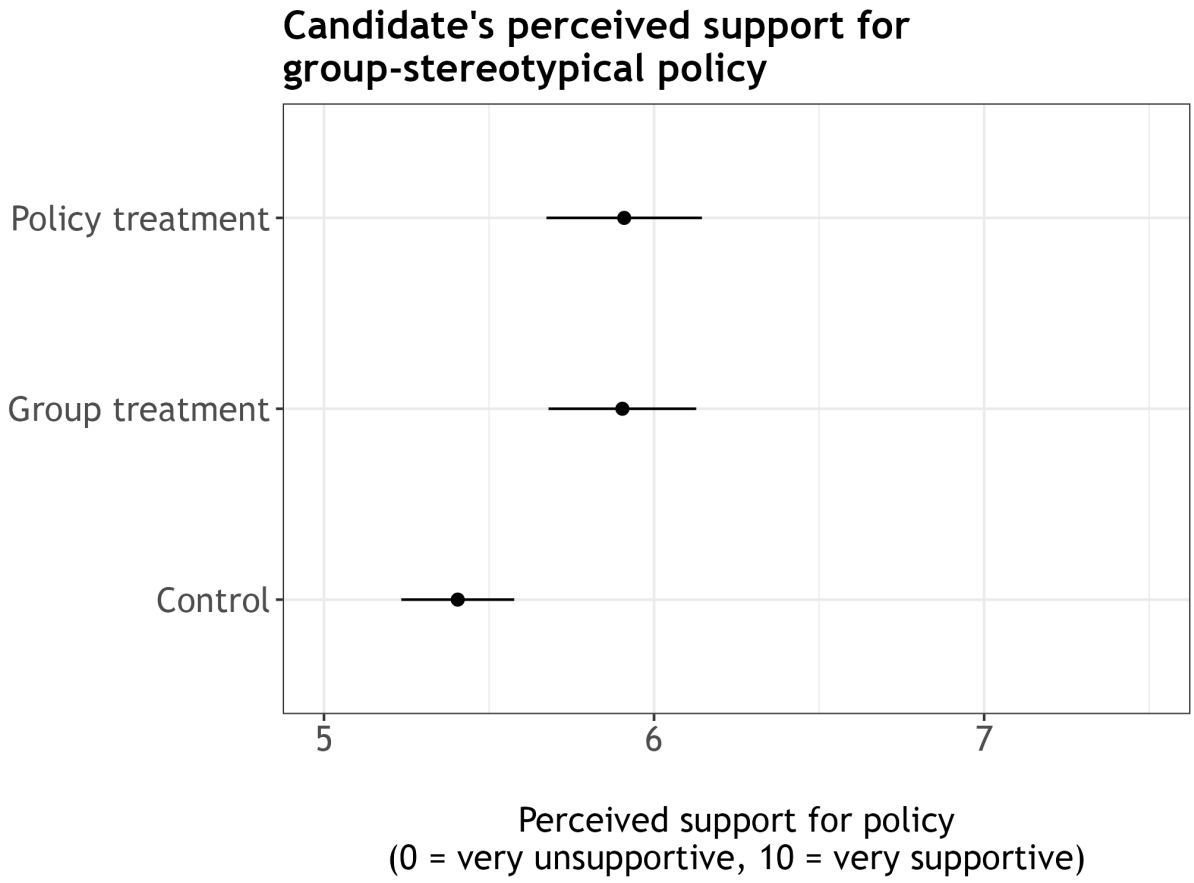
	LGBTQ+	Gun owners	Indigenous
Vignette 1 - condition: group treatment	-3.476 (0.480)		
Vignette 1 - condition: policy treatment	-3.983 (0.453)		
Respondent's group attitude (FT score): LGBTQ+	0.031 (0.052)		
Vignette 1 - condition: group treatment × Respondent's group attitude (FT score): LGBTQ+	0.531 (0.070)		
Vignette 1 - condition: policy treatment × Respondent's group attitude (FT score): LGBTQ+	0.538 (0.066)		
Vignette 3 - condition: group treatment		-3.414 (0.363)	
Vignette 3 - condition: policy treatment		-2.900 (0.381)	
Respondent's group attitude (FT score): gun owners		-0.070 (0.053)	
Vignette 3 - condition: group treatment × Respondent's group attitude (FT score): gun owners		0.558 (0.073)	
Vignette 3 - condition: policy treatment × Respondent's group attitude (FT score): gun owners		0.397 (0.075)	
Vignette 4 - condition: group treatment			-2.665 (0.552)
Vignette 4 - condition: policy treatment			-1.820 (0.542)
Respondent's group attitude (FT score): indigenous peoples			0.103 (0.049)
Vignette 4 - condition: group treatment × Respondent's group attitude (FT score): indigenous peoples			0.473 (0.074)
Vignette 4 - condition: policy treatment × Respondent's group attitude (FT score): indigenous peoples			0.400 (0.073)
Age: 25-34		0.431 (0.288)	
Age: 35-44	-0.152 (0.262)		
Age: 55-64		-0.248 (0.230)	
Born in Canada	-0.288 (0.251)		-0.314 (0.229)

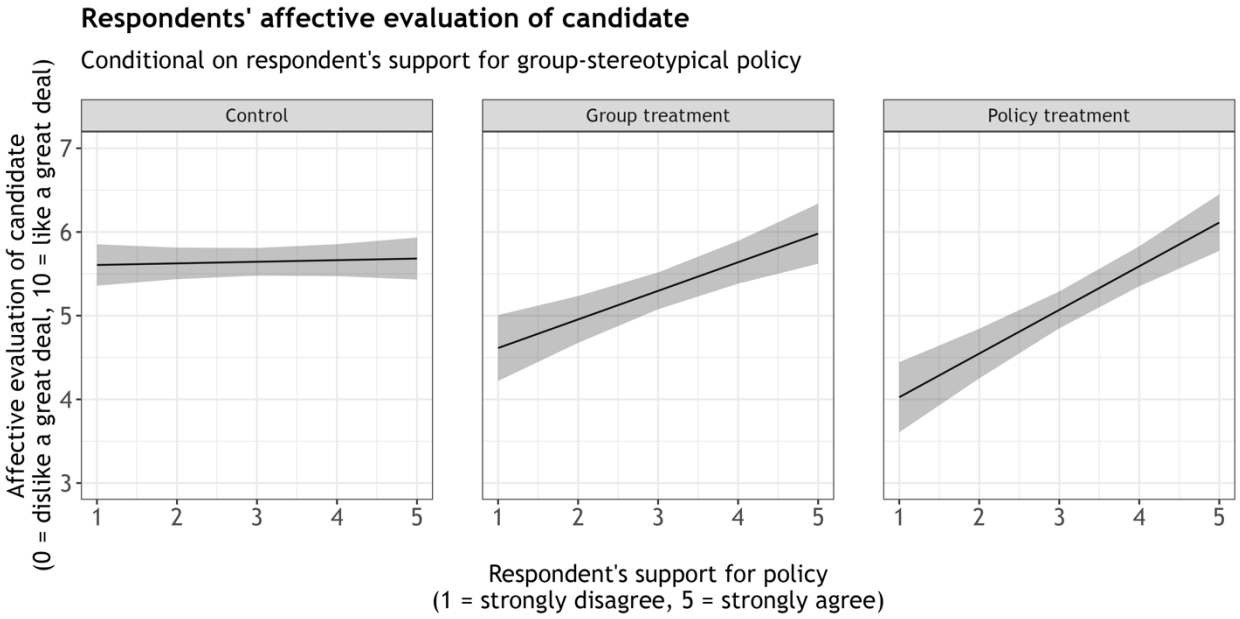
	LGBTQ+	Gun owners	Indigenous
Education: secondary or less	-0.092 (0.236)		0.160 (0.214)
Education: Technical/Community college/CEGEP/Collège classique		0.175 (0.209)	
Education: university graduate	-0.152 (0.189)		0.152 (0.172)
Language: English			-0.557 (0.302)
PID: Bloc Québécois		-0.223 (0.531)	
PID: Conservative	-0.668 (0.216)		-0.353 (0.297)
PID: Liberal	0.494 (0.209)	-0.483 (0.295)	0.086 (0.298)
PID: NDP		-1.286 (0.321)	0.158 (0.314)
PID: other	0.032 (0.401)	0.226 (0.479)	
PID: none		-0.516 (0.288)	-0.519 (0.294)
Region: Atlantic	0.260 (0.278)	-0.038 (0.371)	
Region: British Columbia	-0.019 (0.212)		-0.258 (0.269)
Region: Ontario		0.024 (0.271)	0.163 (0.245)
Region: Prairies		0.346 (0.311)	0.020 (0.272)
Region: Quebec		-0.086 (0.362)	
(Intercept)	5.737 (0.443)	6.113 (0.409)	5.627 (0.503)
Observations	528	528	528
R^2	0.441	0.304	0.352
RMSE	1.85	2.13	1.67

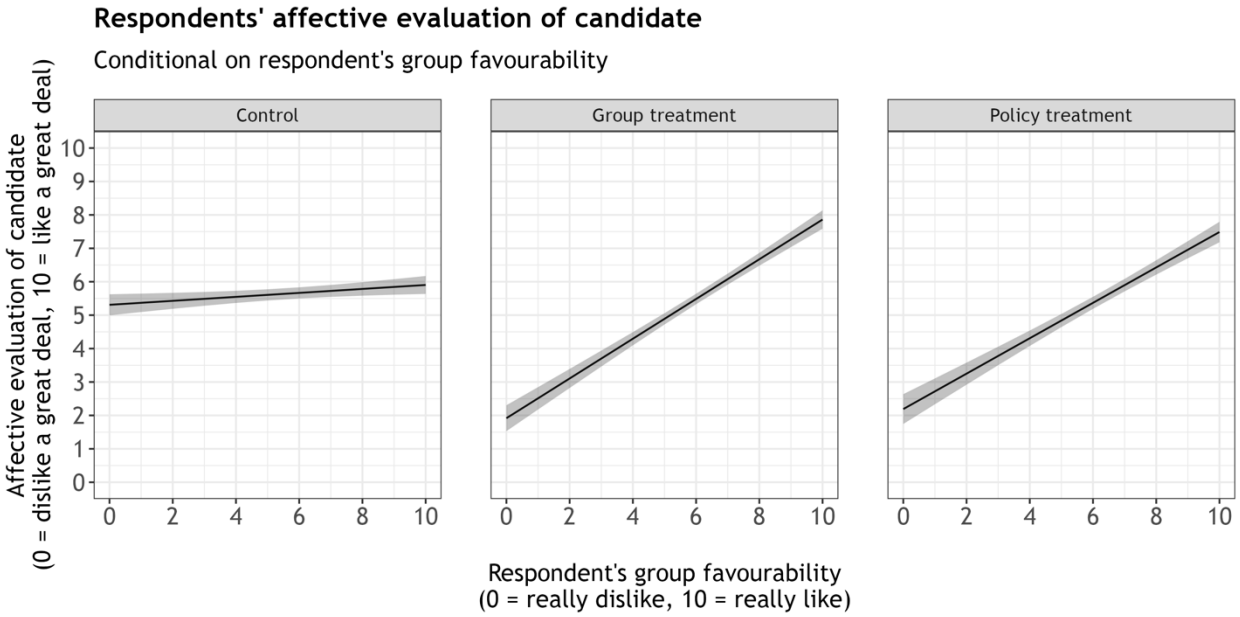
Table 3.11*: Entries are unstandardized OLS coefficients, with standard-errors in parentheses.*

H – Results with inattentive respondents kept in the sample




Candidate's perceived support for group-stereotypical policy
Policy treatment
Group treatment
Control
5
6
7
Perceived support for policy
(0 = very unsupportive, 10 = very supportive)


Respondents' affective evaluation of candidate
Conditional on respondent's support for group-stereotypical policy
Control
Group treatment
Policy treatment
Affective evaluation of candidate
(0 = dislike a great deal, 10 = like a great deal)
3
4
5
6
7
1
2
3
4
5
Respondent's support for policy
(1 = strongly disagree, 5 = strongly agree)


Respondents' affective evaluation of candidate
Conditional on respondent's group favourability
Control
Group treatment
Policy treatment
Affective evaluation of candidate
(0 = dislike a great deal, 10 = like a great deal)
0
1
2
3
4
5
6
7
8
9
10
0
2
4
6
8
10
Respondent's group favourability
(0 = really dislike, 10 = really like)

Third Study

4. Can American-based theories of affective polarization travel to Western European cases? Evidence from nine recent elections (2017-2019)

Affective polarization describes the phenomenon whereby supporters of political parties dislike and even loathe opposing parties and their supporters. It raises serious concerns for the stability of democratic regimes, as affectively polarized citizens have been claimed to prioritize partisan goals over democratic principles (Graham and Svolik, 2020; Kingzette et al., 2021), to politicize ostensibly neutral actors and issues (Druckman et al., 2020) and even to dehumanize out-party supporters (Martherus et al., 2021). The number of studies on the topic has quickly expanded over the last decade, but its theorization and operationalization mainly emerge from studies of the American case, with little work discussing the applicability of these insights to non-American cases. Yet, it is not clear whether affective polarization can be operationalized similarly in multiparty systems to how it is in the United States' two-party system and whether theories accounting for affective polarization in the American context can travel to other cases given the numerous peculiarities of the American political system. Importantly, political competition in the United States is organized around an extremely stable two-party system, in stark contrast to other countries where multiparty systems are the norm and electoral volatility is much higher, i.e., parties tend to come-and-go much quicker (Mainwaring et al., 2017). From citizens' perspective, this is critical as American voters have fewer parties to collect information on and can almost endlessly recycle such information from one election to the next given the stability of their party system. Accordingly, compared to citizens of other western democracies, American voters have a much

easier task when it comes to making sense of the partisan landscape and evaluating political parties. Further, the American two-party system naturally creates an in-group and an out-group for partisans, as identification with a party also necessarily implies the identification of a rival. In contrast, in multiparty systems, the in-group/out-group distinction is not as clear given that many parties tend to be ideologically closer and are often part of electoral or governmental coalitions (Blais and Bodet, 2006). Accordingly, the exact way in which affective polarization manifests itself is potentially different, as citizens may express favourability and hostility toward more than one party. These distinctions between the American two-party system and multiparty systems raise numerous challenges to studies seeking to operationalize affective polarization in multiparty systems that have yet to be resolved (Wagner, 2024).

These concerns are very consequential, as a quickly growing number of studies are using an expanded range of cases to test ramifications of the two American theories of affective polarization, yet we still have very little information on their capacity to travel to other cases. The recent comparative studies have only focused so far on some aspects of one of the two theories (e.g., Harteveld, 2021a; Westwood et al., 2018), on the consequences of affective polarization (Rekker and Harteveld, 2022; Ward and Tavits, 2019) or the measurement challenges associated with studying the topic in comparative perspective (Gidron et al., 2022; Reiljan, 2020; Wagner, 2021; 2024). Others have also tried to identify supplementary, macro-level causes of affective polarization (Hernández et al., 2021). Given the paucity of comparative studies on affective polarization, many have also contributed by presenting descriptive evidence demonstrating the existence of the phenomenon outside the American borders (Gidron et al., 2019; Hahm et al., 2024; Harteveld, 2021b; Kekkonen and Ylä-Anttila, 2021; Reiljan, 2020). Yet, building on the American

literature without having previously tested whether its insights even apply to other cases amounts to putting the cart before the horse.

To solve this lingering issue, this study takes a step back and investigates how affective polarization may differ in Western Europe's multiparty systems. It provides the first comparative inquiry into (potentially) multiparty clusters of affective polarization, whereby voters' affective evaluations of parties may be polarized as in the United States, yet with the difference that there may be more than one party at both poles of their affective evaluations. Recent studies have suggested that the dynamics of affective polarization may differ in multiparty systems compared to two-party systems, as voters may be positively biased toward multiple parties and negatively biased against many parties in the former, i.e., so-called "clusters" of polarization (Bantel, 2023; Kekkonen and Ylä-Anttila, 2021; Reiljan and Ryan, 2021). This pattern differs from the two-party setting where voters typically pick a party which they like and naturally dislike its opponent. Indeed, these studies on affective polarization in Europe suggests polarization takes on an ideological nature, with populist parties also fostering an additional polarization cluster. Unfortunately, only Bantel (2023) provides a comparative analysis on the topic, but does not provide detailed individual-level insights such as Kekkonen and Ylä-Anttila's innovative clustering analysis (Kekkonen and Ylä-Anttila, 2021). This study expands on these earlier contributions by testing the notion of "affective blocs" in a broad comparative setting through a sophisticated individual-level analysis using a clustering technique.

Further, the analysis also provides a comparative empirical test of the two leading American-based theories seeking to explain the development of affective polarization, i.e. the policy-driven mechanism – which claims that ideological polarization fosters affective polarization – and the group-driven mechanism – which claims that social partisan sorting is at the

heart of the process. In doing so, this article seeks to evaluate the two theories' capacity to account for affective polarization in Western Europe, where affective polarization is claimed to reach comparable levels to those in the United States (Boxell et al., 2024). To do so, it focuses on the immigration issue – a very salient one in Western Europe, though with different levels of polarization across the subcontinent – and ethnicity as a social identity. The focus on a single issue and social identity is guided by the challenges associated with the left/right ideological cleavage – which has a different meaning in different countries – and the different social identities that are politically pertinent in each country. Further explained below, this choice is guided by a trade-off intended to maximize the internal validity of the analysis all the while keeping a broad scope.

This article contributes to the literature in three ways. First, it provides a novel, more granular measure of affective polarization focusing on voters' polarization toward each party individually, which enables more specific analyses that were impossible with previous, higher-level measures of affective polarization. Second, it describes the multiparty nature of affective polarization in Western Europe by identifying clusters of respondents who display similarly polarized attitudes toward multiple parties and focusing on the nature of the distinction between in-group and out-group. Third, it provides an empirical test of the two main theories that have been developed in the American-based literature. By focusing on European elections, we gain a great amount of inferential leverage, as such focus allows the sample used in this study to have different combinations of ideological polarization and social partisan sorting, thus enhancing its capacity to assess whether both factors are also associated with affective polarization outside of the United States.

Yet, as argued in the previous studies of this dissertation, both theories are potentially highly interconnected, as voters often use cognitive shortcuts to simplify the political landscape

and are thus likely to use parties' favourability toward social groups to infer their policy commitments – and vice versa. Whereas the previous studies in this dissertation have used experimental manipulations to address such entanglement, the observational and broad-scale nature of this study's research design prevents it from directly addressing this concern. Instead, it simultaneously tests both theories, which can provide valuable, albeit qualified evidence on the matter. Indeed, finding a similar relationship between policy preferences and affective polarization, on the one hand, and group favourability and affective polarization on the other, would provide preliminary evidence suggesting that this entanglement might also apply in Western Europe. This is particularly significant given that the nine cases on which this study focuses have different combinations of ideological polarization and social sorting, thus finding that the two mechanisms are similarly related to affective polarization in Western Europe would suggest that their entanglement can occur under a variety of circumstances.

The analysis presented in this paper relies on both data about voters and about parties. Crossing three different datasets together, it first relies on an inductive k-means clustering analysis to identify patterns of polarization in each of the sample's nine elections. It then proceeds to use ordinary least squares regression to test the policy-driven and group-driven perspectives on the sources of affective polarization, with the objective of validating whether both theories find preliminary support for their applicability beyond American borders. The clustering analysis illustrates different patterns of polarization, where positive and negative affective evaluations typically do not revolve around a single party, which suggests that the binary in-group/out-group distinction used to study affective polarization in the United States may not be suited to studying the topic in multiparty systems. The results of the second part of the analysis suggest that American theories detailing the sources of affective polarization have the potential to extrapolate to other

cases, albeit with some important nuances. Notably, the similarity of the relationship between social sorting and affective polarization, on the one hand, and ideological polarization and affective polarization on the other, once again suggest that the two mechanisms may be entangled in voters' minds and thus potentially not as clearly separate as theoretical discussions may suggest.

4.1. Theory and Hypotheses

The concept of affective polarization was first developed to make sense of the growing hostility between American parties and their electoral bases. Shanto Iyengar and his colleagues introduced the concept by relying on social identity theory to make sense of the in-group bias that American partisans exhibit (Iyengar et al., 2012, on self identity theory see Tajfel, 1974; Tajfel and Turner, 1979). One of the most obvious differences when comparing the American party system to European party systems is the former's biparty nature, which provides a stark contrast to the multiple parties winning seats in most European elections. The in-group/out-group distinction critical to social identity theory applies readily to the United States' two-party system, but European party systems tend to be characterized by more fluid partisan boundaries, as European voters have been found to have weaker and more volatile partisan ties in comparison with their American counterparts (Bankert et al., 2017; Huddy et al., 2018), sometimes even identifying with multiple parties simultaneously (Garry, 2007). This fundamental difference calls into question the interpretation of the typical single party in-group based on partisanship used in studies focusing on the American case (Wagner, 2024). Addressing this concern, some have suggested that ideology might be a stronger determinant of political identity than partisanship (Harteveld, 2021b), with the results of empirical analyses focusing on Canada (Gidengil et al.

2022), the Netherlands (Bantel, 2023) and Finland (Kekkonen and Ylä-Anttila, 2021) lending credence to such claim. Kekkonen and Ylä-Anttila (2021) state that citizens can be grouped in "affective blocs" displaying comparably warm attitudes toward common parties and cool attitudes toward other groups of parties. In a nutshell, their findings suggest voters would harbour positive feelings toward multiple parties that are ideologically compatible with their beliefs, all the while expressing negative feelings toward parties that represent different beliefs and values. As such, leftist voters would have warm feelings toward all left-of-center parties, all the while disliking all right-of-center parties, and vice versa for rightist voters. Their findings suggest we may need to move beyond the in-group/out-group distinction when analyzing affective polarization in multiparty systems.

H1: voters can be grouped into two "affective blocs" that display positive (negative) attitudes toward multiple ideologically (in)compatible parties.

To falsify H1, there are a few possibilities. A likely scenario would be that affective polarization among Western European voters operates similarly to how it does in the United States, i.e., that voters are only positively biased toward a single party and negatively biased against another, potentially the most direct competitor of their favoured party, all the while being lukewarm toward all other parties. Another possible scenario would be that voters are positively biased in favour of multiple parties that are ideologically incompatible and negatively biased against multiple incompatible parties (e.g., a leftist environmentalist party and a libertarian party). This latter possibility would suggest that there are affective blocs, but that they fail to map onto a

traditional left/right ideological cleavage, potentially mapping onto a distinct cleavage such as the economic, the socio-cultural or the European integration dimension.

In addition to ideological differences, we also expect another factor to foster a supplementary cluster of affective polarization. Focusing on the Swedish case, Reiljan and Ryan (2021) find that the left/right ideological divide creates two clusters of affective polarization – supporters of leftist parties and supporters of rightist parties – but also that the presence of a populist right-wing party creates an additional cluster of affective polarization, as the latter party and its supporters are loathed by both left-wing party supporters and traditional right-wing party supporters. Accordingly, we expect that whenever there is a populist party (regardless of whether it is right-leaning, left-leaning or not clearly aligned), there will be a third cluster of affective polarization, a phenomenon coined "tripolarization" by Reiljan and Ryan.

H2: the presence of a populist party will create a third cluster of affective polarization.

Focusing now on the roots of affective polarization, the literature on the topic mainly revolves around two distinct theories that were developed in the United States. A first perspective identifies policy debates and especially polarization around them to be the major driver of affective polarization (Alagara & Zur, 2023; Banda and Cluverius, 2018; Rogowski and Sutherland, 2016; Webster and Abramowitz, 2017). The argument is simple: from the voter's perspective, as the ideological gap between parties widens, the party on the opposite side of the ideological spectrum becomes an increasingly unappealing option, fostering a greater sense of dislike. Throughout the rest of the paper, I refer to this theory as the policy-driven perspective. A second approach builds on social identity theory (Tajfel, 1974; Tajfel and Turner, 1979) to offer what I will call throughout

this piece a group-driven perspective on affective polarization. Here, the focus is on the process of social partisan sorting, whereby support for a given party is predominant among a social group, i.e., citizens "sort" themselves into parties in a way which maps onto social boundaries. When electoral alliances between social groups and parties are clear to voters, this enhances the perceived distance between groups and enables voters to project their group evaluations onto the parties supported by those groups (Mason, 2016; Robison and Moskowitz, 2019).

A major issue that the literature faces, which further warrants investigating the two theories outside of the American context, is the empirical and theoretical entanglement of both theories. Empirically, the theories cannot be separated as social partisan sorting has increased over the last decades in the United States, especially along racial and religious lines, exactly as ideological polarization was also growing itself. Statistical analyses using observational data are thus unable to arbitrate between the two theories given their co-occurrence. In contrast, in other contexts where social partisan sorting and ideological polarization have not necessarily moved in tandem, it may be more feasible to study whether both factors are related to affective polarization. Western European countries provide such valuable pool of elections to study, as patterns and levels of social sorting vary across the continent, with some countries exhibiting stronger patterns of social sorting along partisan lines than others (Harteveld, 2021a: Appendix B).[15] Further, ideological polarization also varies considerably across the continent, being very high in countries such as Sweden, Spain and Italy, and very low in countries such as Austria, Ireland and Germany (Dalton, 2021: Table 1). This is critical for our purposes as having varied levels of social sorting and

[15] Harteveld (2021a) tests social sorting along partisan lines in 119 elections in 40 countries, with social sorting results for 12 Western European countries. The analysis focuses on the extent to which citizens that have similar social characteristics share the same partisan identity. Four social variables are used to analyze social sorting: income, education, region and religion. Compared to the United States, the results suggest that social partisan sorting is lower in some Western European countries, while it reaches similar levels in other countries in the region.

ideological polarization makes it likely that we will have cases where both factors do not covary as they did over the last decades in the United States.

Formalizing our empirical expectations, the policy-driven perspective claims that citizens' affective evaluations of parties mirror their policy proximity with the party. Accordingly, citizens would evaluate more warmly parties whose policy commitments are perceived to be close to their own policy preferences and vice versa for parties whose policy commitments are considered distant from their preferences.

H3: Greater (lower) policy proximity between a voter and a party leads to warmer (colder) affective evaluations of the party.

The group-driven perspective, in contrast, claims that social partisan sorting is the main driver of affective polarization. When social groups overwhelmingly "sort" themselves into a specific party, it creates a perceived alliance between the party and the group in voters' minds, which enables voters to project their group evaluations onto the parties that such groups are aligned with. Once a voter establishes a connection between the party and a group, they should adjust their affective evaluations of the party consistently with their affective evaluations of the group. Simply put, if they like a social group and learn that the group is aligned with a certain party, their affective evaluations of the party should become more positive.

H4: voters' affective evaluations of parties will be consistent with their affective evaluations of groups they are aligned with.

Yet, a major caveat remains. As argued in the first two studies of this dissertation, the policy-driven (H3) and group-driven (H4) mechanisms may not be as clearly distinct in voters' minds as in that of scholars. Extant literature demonstrates the widespread use of cognitive shortcuts by voters, with the latter using social identities as signals of policy preferences, and vice versa (Brady & Sniderman, 1985; Chambers et al., 2012; McDermott, 1998; Page & Shapiro, 1992; Sanbonmatsu, 2002). The deep entanglement of both issues in voters' minds is illustrated by claims that citizens' issues preferences are significantly influenced by their perceived impact on social groups (Converse, 1964; Gilens, 1996; Citrin et al., 1997). This deep connection between issues and groups allows most voters to overcome their middling levels of political information (Converse, 1964; Delli Carpini & Keeter, 1996) by simplifying their information-acquisition process (Downs, 1957; Lupia, 1994; Popkin, 1991; Sniderman et al., 1991). Accordingly, learning about a party's favourability toward social groups may lead them to infer about its policy commitments, and vice versa. The theoretical consequence of such heuristic mechanism would be that both mechanisms – policy-driven and group-driven – would be entangled in voters' minds, i.e., that voters fail to distinguish between policies and social groups as both theories posit.

The research design used in this study prevents me from directly testing this entanglement, but it nevertheless offers us the possibility to look for some indirect evidence, i.e., necessary but not sufficient evidence to prove the entanglement in voters' minds. For it to be plausible, we should find that the relationship connecting policy proximity between a voter and a party and affective evaluations of such party is nearly identical to the relationship between a voter and a party's favourability toward social groups and affective evaluations of such party. Finding that voters react similarly to parties' group favourability and policy commitments would suggest that they may not distinguish between the two.

H5: the relationship between voters' policy preferences and group favourability and their affective evaluations of parties will run in the same direction (positive/negative) and be of similar magnitude.

4.2. Data and Measures

Rather than focusing on ideological polarization and social sorting at large, the analysis hones in on the issue of immigration – i.e., debates that relate to immigration policies, to the rights of ethnic and cultural minorities and conceptions of citizenship – and ethnicity as a social group. The reasons for doing so are threefold. The first is about enhancing the comparability between the pool of cases that this study investigates. Focusing on ideology at large would open the door to important questions over the validity of the results, as issues that dominate policy debates in each country tend to vary. As always, comparing multiple cases together implies a trade-off between seeking differences on variables of interest, all the while enhancing comparability through similarity on variables that are not the study's focus. Since this paper is not interested in identifying *which* issues can drive affective polarization, I neutralize that question by investigating a single issue. The second reason to focus on immigration is about enhancing comparability between our pool of European cases and the United States. In the latter case, racial tensions have profoundly divided the country and put several policy debates over immigration and racism at the center of the political agenda. Many have claimed that such racial tensions, along with the accompanying growing trend of social partisan sorting along racial lines, are among the main drivers of affective polarization in the United States (Mason, 2016; Mason and Wronski, 2018; Robison and Moskowitz, 2019). Admittedly, racial tensions take a different form in Western Europe, as they

tend to revolve around recent waves of immigration, whereas in the United States immigration rather adds onto pre-existing and protracted racial tensions. Nevertheless, this focus allows this study to enhance comparability within our cases and comparability with the American case, on which most of the theorization about affective polarization is based. Finally, this issue also provides variance within our cases, as it is considered very salient in some European cases, such as the United Kingdom and Netherlands, but less so in other countries such as Belgium and Ireland (Morales et al., 2015). Accordingly, we can expect different levels of ideological polarization over immigration among our cases, something that is importantly absent from the American case.

The analysis relies on three different datasets, crossing together voter-level and party-level data. The voter-level data is taken from the fifth wave of the Comparative Study of Electoral Systems (CSES). The dataset revolves around a common questionnaire that was included in probabilistic electoral surveys conducted in multiple countries around the world and includes questions about attitudes toward immigrants and nativism that allow me to test the hypotheses stated above. To maximize comparability across the cases included in my sample, I only focus on Western European elections. Non-European democracies tend to have different party systems and important cultural differences which may bias the results if they were included in the analysis, whereas Central and Eastern European countries share a short democratic history due to their communist past which is likely to foster numerous important contextual differences with their Western European counterparts.

To conduct a valid test of this study's empirical expectations, I also need data about the parties in our sample. To maximize the robustness of the results and ensure that they are not dependent on a particular operationalization of parties' policy commitments on the issue of immigration, I rely on four distinct measures of parties' positions on the issue. These four measures

are taken from two datasets, the first of which is the Chapel Hill Expert Survey (CHES), where experts of European politics are questioned about the ideological leanings of parties on a variety of salient political issues, with parties' positions being defined as the mean expert evaluation on each issue (Jolly et al., 2022). The survey is not directly tied to any election, being circulated among experts roughly every five years. Accordingly, to match party evaluations with elections studied in the CSES, I use the CHES survey conducted closest to each CSES election as my measure of parties' policy commitments.

The CHES dataset provides us three questions that closely relate to the issue of immigration. The first is a measure of parties' positions on multiculturalism, with the issue being defined as the integration of immigrants and asylum seekers and pro-multiculturalism parties being opposed to those that favour an assimilationist approach. The second measure indicates parties' positions on the issue of immigration, with parties favouring a liberal immigration policy being juxtaposed to those that favour a restrictive policy. The third measure captures parties' positions toward ethnic minorities, with parties that support more rights for ethnic minorities placed at one end of the spectrum and those that oppose granting more rights to ethnic minorities lying at the other end. All three questions are measured on a 0-10 scale and relate to different dimensions of the broad immigration cleavage that this study focuses on.

To provide more robustness to the analysis, I also use a second dataset to measure parties' positions on the issue of immigration. I rely on the Comparative Manifesto Project (CMP), which codes election programs of all non-marginal parties in 56 countries over the last century (Lehmann et al., 2022). To operationalize parties' positions on the issue, I use a measure provided in the dataset which counts the number of positive and negative statements included in parties'

programmes about immigration.[16] I compute the balance between positive and negative statements on immigration, which yields a measure of each party's relative position on the issue.[17] This operationalization is standard when using the CMP dataset and has been shown by O'Grady and Abou-Chadi (2019) to properly capture parties' position on the major issues dominating elections. Results of models using the CMP and CHES datasets are then pooled together using a model averaging technique – described below – which prevents the idiosyncrasies of each dataset to dictate the results.

After crossing the three datasets together, some elections included in the CSES were dropped because they were not included in either the CHES or CMP datasets. The final sample covers nine elections held over the period 2017-2019.[18] The three datasets contain information about the major parties competing in each election, i.e., all parties that gather roughly over 5% of vote shares. All parties included in the data are part of the analysis.

A critical decision when studying affective polarization relates to the concept's operationalization. In the United States, things are simple as one can take the difference between in-party and out-party feeling thermometer scores given the two-party nature of the American party system. In multiparty systems, the operationalization is not as straightforward. Most have operationalized affective polarization as a concept applied at the level of the party system rather than at the party-level. Wagner, for example, defines affective polarization in multiparty systems as "the extent to which individuals feel positively towards one or more parties and negatively towards other parties." (Wagner, 2021: 3). Analytically, Wagner focuses on the amount of spread

[16] Examples of negative statements are those that advocate for restrictions on immigration, negative depictions of the impact of immigration on the nation or arguments claiming that the country has reached its full capacity of immigrants. Examples of positive statements include those that favour welcoming new immigrants, that oppose immigration quotas and that prime the positive impact that immigration can have on the country (e.g., economic).
[17] Variables per601_2 and per602_2 in the CMP dataset.
[18] The elections included in the sample are the following: Austria 2017, Belgium 2019 (Flanders only), Denmark 2019, Finland 2019, France 2017, Germany 2017, Great Britain 2017, Italy 2018 and Portugal 2019.

in the like-dislike scores for all parties by each survey respondent, with greater spread being indicative of affective polarization. Reiljan uses a different approach, focusing on the average distance between in-party and out-party like/dislike scores, weighted by parties' vote share, using partisan identification as the demarcation criteria between in- and out-parties (Reiljan, 2020). Although it slightly differs from Wagner's approach, Reiljan's operationalization also results in a single affective polarization score per respondent, which indicates their polarization toward the whole party system.

Although both approaches have proven fertile, as others have used them successfully (e.g., for Reiljan's operationalization, see Gidron et al., 2021; Harteveld, 2021a; Kekkonen and Ylä-Anttila, 2021; for Wagner's operationalization, see Hernández et al., 2021), this study rather uses a novel operationalization of affective polarization. Consistent with its theoretical framework's focus on factors that determine voters' affective evaluations of each party individually, I create a measure that provides information on survey respondents' level of affective polarization toward each party rather than the whole party system. This is something that other operationalizations fail to do, as Reiljan's (2020) approach yields a single affective polarization score per election, which allows us to compare elections to one another, but makes it impossible to study variation in levels of polarization across parties and voters within a single election. Wagner's (2021) approach partly addresses this limitation by providing a voter-level measure of affective polarization, which can inform us on *who* is polarized and what their characteristics are but makes it impossible to study which parties are these voters polarized against and what are the features of parties that foster polarization. Accordingly, none of these two approaches is well suited to test the hypotheses presented in this paper.

To overcome these limitations, this study uses a dyadic party-voter measure of affective polarization, which provides us information on exactly which parties are positively and negatively evaluated by each voter. This measure is similar to that used by Dassonneville et al. (2024), who successfully leveraged it to study vote choice in multiple European multiparty settings. Accordingly, for a party system with *n* parties competing for seats, I have *n* measures of affective polarization per respondent, i.e., one for each party. The measure AP of affective polarization can be summarized as

$$AP_{ij} = FT_{ij} - FT'_i$$

for respondent i toward party j, where AP is our measure of affective polarization for respondent i toward party j, FT_{ij} is respondent i's feeling thermometer score toward party j and FT'_i is respondent i's highest feeling thermometer score (i.e., the score given to their most liked party, which is not necessarily the party that a respondent identifies with). This measure is also similar to that used by Boxell et al. (2024), with the important differences that it focuses on all survey respondents rather than only partisans and does not aggregate the results by election. This operationalization is thus significantly more detailed and comprehensive than others for two reasons. First, it accounts for affective polarization among the full electorate rather than only among partisans. Second, it focuses on affective evaluations toward each party rather than a single aggregated measure that averages across evaluations of all parties, thus potentially masking important patterns of polarization. This alternative measure thus goes beyond previous ones by providing us information regarding which parties drive respondents' affective polarization.

The measure can theoretically range from -10 to 0 for respondents who score their most liked party 10/10 on the feeling thermometer score and their least liked party 0/10. For respondents who give a low score to their most liked party (i.e., respondents that have a relatively negative

outlook toward all parties) and/or a high score to their least liked party (i.e., respondents that have a particularly positive outlook toward all parties), the range of the measure decreases as its lower bound is higher. To illustrate, a score of -2 for respondent *i*'s evaluation of party *j* on my affective polarization measure means that the respondent scored party *j* two units lower on the feeling thermometer than their most liked party, regardless of how they scored their most liked party. A limitation of this measure is that it fails to directly inform us on how much each respondent likes their preferred party, i.e., it fails to mention whether the respondent is a strong supporter of the part (giving it a 10/10 score) or a moderate supporter of the party (giving it a 7/10 score or so). While this information is pertinent in its own right, it is nevertheless integrated into the measure as providing a lower score to the most liked party results in raising the floor of the measure – i.e., the lower the score given to the most liked party, the higher the floor of the measure. This alternative measure of affective polarization allows me to better test the hypotheses guiding this study, as they all focus on the determinants of voters' affective evaluations of parties, which themselves underlie the macro-level phenomenon of affective polarization.

To properly test this study's hypotheses, I also need a measure of voters' positions on the issue of immigration (for testing H2) along with their group attitudes toward immigrants and ethnic minorities (for testing H3). To measure group attitudes, feeling thermometer questions are most commonly used, but are unfortunately not included in the CSES data. The closest alternative is a set of seven questions that relate to immigration, asking respondents about their attitudes toward immigrants as a social group and immigration as a policy. To test whether these questions allow me to measure their policy preference over immigration and attitude toward immigrants as a social group, I conducted factor analysis on all seven pertinent questions and the results suggested that a two factors solution leaving out one of the questions provides scales with a high level of internal

consistency. A first scale, that I conceptualize as measuring respondents' group attitudes toward immigrants, is composed of three questions and asks them about their level of agreement with statements suggesting 1) that immigrants increase crime rates in their country, 2) that immigrants harm their country's culture and 3) that immigrants are generally good for their country's economy (reversed). This scale of attitudes toward immigrants ($\alpha = .77$) will be used for testing the social partisan sorting hypothesis (H3), whereby we expect that people project their group attitudes onto parties within which such groups cluster. Importantly, this measure is devoid of direct policy implications and thus serves as a proper test of the group-driven mechanism which focuses exclusively on the impact of policy considerations on affective evaluations of parties and candidates. Although it does not question respondents directly about their feelings toward immigrants as a feeling thermometer question would, it nevertheless captures the valence component of respondents' attitudes toward immigrants, which is what feeling thermometers are designed to do and thus serves as a useful proxy.

A second scale, that I conceptualize as measuring respondents' level of nativism, is composed of three questions asking respondents how important it is to be truly national 1) to be born in the country, 2) to have national ancestry and 3) to follow the country's customs and traditions ($\alpha = .76$). Although this scale measures nativism and not exactly support for immigration as a policy, I consider it to be a very close approximation of the latter given that it provides information on the openness of respondents to treating immigrants as citizens, which can plausibly be expected to translate into openness to receiving more newcomers. Further, this measure is useful in leaving aside all valence considerations about immigrants and only probing respondents about their conception of citizenship. Accordingly, it leaves aside group attitudes, as the policy-driven

perspective assumes that policy considerations predominate in the process of affective polarization.

A seventh question, asking respondents how important they believe it is to speak the country's first language to be truly national is left out of both scales as it does not load sufficiently onto either of them. Full results of the factor analysis can be found in Appendix A. Summary descriptive statistics of all variables used in the analysis are presented in Appendix B.

4.3. Affective blocs

To further our understanding of affective polarization in Europe, I expand the analysis presented in Kekkonen and Ylä-Anttila (2021) to nine Western European elections to identify "affective blocs" of partisan polarization. This analysis is critical to help us understand how to operationalize affective polarization in multiparty systems. So far, the binary distinction between in-party and out-party, typically based on partisanship, has been preferred in comparative studies of affective polarization (Gidron et al., 2019; Harteveld, 2021a; Reiljan, 2020). Yet, this may not be optimal, as voters in such party systems may exhibit favourable attitudes toward multiple parties at once, as evidenced by recent studies on affective polarization in Western Europe (Harteveld, 2021b; Reiljan and Ryan, 2021). Accordingly, by using partisanship as the demarcation criterion and thus comparing a voters' affective evaluations of the party they identify with to that of parties they do not identify with, we lump together parties that the voter likes and others that they dislike, providing a distorted representation of their level of affective polarization. Indeed, lumping together liked and disliked parties may make voters seem less polarized than they truly are as liked parties are treated as part of the out-group.

To investigate whether these concerns are legitimate, I conduct a clustering analysis using respondents' raw affective evaluation scores toward all parties they were questioned about, on the original 0-10 scale (the voter-party dyadic measure is only used in the second part of the analysis), to identify clusters of respondents who have similar attitudes toward each of the parties in their party system. The analysis is conducted using a k-means algorithm, an unsupervised clustering technique which seeks to group together data points that demonstrate high similarity with regards to the values of some variables, with those variables being selected by the researcher (in my case, affective evaluations of parties). The way data points are grouped depends primarily upon the researcher's decision regarding the number *k* of clusters to be used, which is typically guided by empirical considerations, as researchers seek the optimal balance between the internal coherence of clusters (which grows as *k* gets larger) and parsimony (which decreases as *k* gets larger). The algorithm is initialized with *k* random centroids, which serve as the cluster means, and the other data points are then grouped with the centroid whose mean is closest to their own values. Having clustered together data points, the algorithm updates the centroids to represent the new mean value of each cluster and then re-allocates each data point to the updated clusters based on proximity with the updated centroids. The algorithm proceeds iteratively as described until it converges on an optimal solution. Each cluster represents a group of voters that are found to be similar in their feelings toward parties, with all voters being placed in a single cluster.

The critical decision to identify clustering patterns relates to the selection of *k*, the number of clusters, for which there is no objective rule. To guide my decision, I use the NbClust package in R, which uses 23 different indices to determine the optimal number of clusters and uses the majority rule to select the number *k* which best fits the data.[19] Accordingly, both the number of

[19] I evaluate values ranging from 2 to 10 clusters.

clusters and their composition are inductive processes guided solely by empirical considerations, an approach that I consider sensible given my lack of empirical expectations regarding the number of "affective blocs" and their composition in each country. The results of the analysis of the optimal number of clusters are presented in Appendix C. Only the Netherlands 2017 election resulted in a tie between two different number of clusters. I thus present in the main text the results for the number of clusters whose substantive interpretation appears most sensical but also present in Appendix D the results for the other value of *k* deemed likely by the empirical analysis.

Based on H1, we expect that there will be two ideological clusters for each election: a cluster of respondents with positive feelings toward right-leaning parties and a cluster of respondents with positive feelings toward left-leaning parties. Further, in accordance with H2, we expect that whenever a populist party is present in an election, it will create a third pole of polarization, or "tripolarization" as Reiljan and Ryan (2021) call it. In our sample, there is a populist party competing in all but one election – the Portuguese 2019 election. I thus expect to find three clusters of affective polarization for the other eight elections, and only two ideological clusters in the Portugese sample.

The results of the clustering analysis are presented in Figures 4.1 and 4.2. To interpret the results, one needs to pay attention to the number of bars for each election and their height. The number of bars for each election varies between two and five and represent the number of clusters – or "affective blocs" – identified for each election. For example, if there are three bars for an election, this means that the algorithm identified three clusters of voters exhibiting similar patterns of favourability toward parties. The height of the bars represents the mean affective evaluation of each party (identified in the panel title) within each cluster, where higher bars indicate warm

feelings and low bars indicate cold feelings. Importantly, the clusters are independent from one election to the next, as the clustering algorithm is applied separately to each election in the sample.

For each election, I only present the solution with the optimal number of clusters. The parties are sorted ideologically, with left-leaning parties positioned first and right-leaning parties positioned last for each election. To further illustrate how to interpret the results, I will walk through the results for Austria. The plots include two bars, which indicates that the algorithm estimated that the whole electorate could be divided in two groups based on the similarity of their like/dislike scores toward all parties. A first "affective bloc" – in grey – exhibits moderate to high favourability toward all three left-leaning parties (GRÜNE, JETZT, SPÖ) and both center/center-right parties (NEOS, ÖVP). This first cluster is only very negative toward the right-wing populist FPÖ. Turning to the second cluster – in turquoise –, it is highly favourable toward the most right-leaning parties (ÖVP and populist FPÖ), and progressively more negative toward parties as we move toward the left of the ideological spectrum. Accordingly, rather than a clear ideological cleavage supplemented by a populist cleavage, the results for Austria rather suggest a mix of ideology-based affective polarization and polarization against a populist party. These results underscore an important difference with the American context, i.e., that many parties at once are the recipients of affective polarization among the electorate.

Looking at the results across all elections, the first striking finding is the small number of clusters (affective blocs) that prevails in most cases. For five out of the nine elections, a solution using only two clusters is found to best describe the data. Three other elections are best described by a three-clusters solution, also a small number, whereas only one election is best described by a

Figure 4.1*: Results of k-means clustering. Each bar represents a distinct cluster, with each plot representing clusters' affective evaluations of a given party. The height of the bars represents the mean affective evaluations of parties within each cluster, on a 0-10 scale.*

high number of clusters, i.e., five (Portugal 2019). This finding is generally consistent with H1 and H2, based on which there should only be two or three clusters in each election.

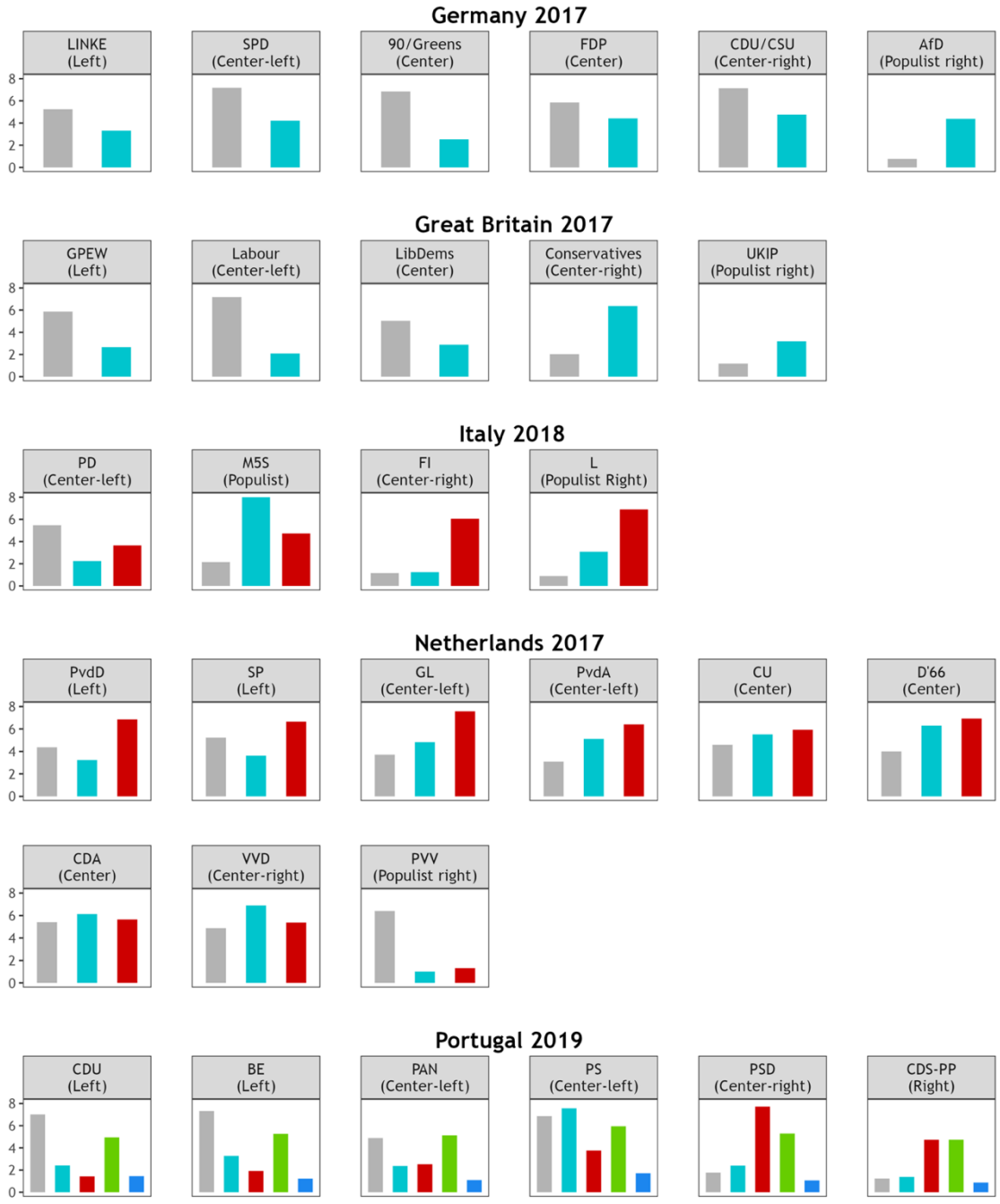


***Figure 4.2**: Results of k-means clustering. Each bar represents a distinct cluster, with each plot representing clusters' affective evaluations of a given party. The height of the bars represents the mean affective evaluations of parties within each cluster, on a 0-10 scale.*

The exact patterns of polarization found within each affective bloc underscore the multiparty nature of the phenomenon in Western Europe, in contrast to American elections. Four

of the five elections that are best represented by two clusters – Austria, Belgium, Denmark and Great Britain – present clustering patterns that map onto ideological lines, as their first cluster (in grey) exhibits favourability toward left-leaning parties and negativity toward right-leaning parties, and vice versa for their second cluster (in turquoise).

France, Italy and the Netherlands, that are all best represented by a three clusters solution, also demonstrate a pattern of ideological sorting, with the difference that a populist party creates an additional cleavage of polarization, i.e., what Reiljan and Ryan call "tripolarization" (Reiljan and Ryan, 2021). In France, the first and second clusters map onto ideological lines, with the first cluster (grey) exhibiting favourability toward left-leaning parties and the second cluster (turquoise) exhibiting favourability toward center-right parties. The third cluster (red) is essentially marked by its favourability toward the right-wing populist nationalist Front National (FN) party. Italy also provides a similar mix of ideological sorting and aversion toward a populist party. Its first cluster (grey) is marked by its favourability toward the center-left Democratic Party (PD) and aversion toward all other parties. Its second cluster (turquoise) distinguishes itself by its favourability toward the populist Five Star Movement (M5S). Finally, its third cluster (red) differs from others by being mostly favourable to right-leaning parties, i.e., Forza Italia (FI) and the populist right-leaning Lega (L). The latter party is a bit more ambiguous, as it is a populist party but follows a pattern of ideological sorting rather than creating a separate populist cluster as the M5S does. The Lega's positioning within the right-leaning ideological cluster underscores the ambiguous position of populist parties and how they will not necessarily create an additional, populist cluster. Indeed, their ideological position means that they can also be accepted by voters as part of "their" ideological camp. The conditions under which they can be accepted (or not) as part of the ideological cluster should be investigated in subsequent studies.

In the Netherlands, the pattern of ideological polarization is less clear, but still perceptible, as its third cluster (red) is slightly more favourable toward left-leaning parties, whereas its second cluster (turquoise) is somewhat more favourable toward right-leaning parties, with the exception of the right-wing populist nationalist Party for Freedom (PVV). What really sets apart the Netherland's first cluster (grey) from the other two is its relatively favourable attitudes toward the PVV, which is despised by the two other clusters of affective polarization, another case of "tripolarization".[20] In those three elections (France, Italy and the Netherlands), polarization appears to revolve around both ideological divides and attitudes toward a populist party that cleaves its electorate.

Germany provides a more ambiguous case, as only two clusters are found, yet the main difference between the two clusters lies in their attitudes toward the right-wing populist AfD. Indeed, whereas the first cluster (grey) is generally favourable toward all parties across the ideological spectrum, from the leftist LINKE party to the center-right CDU/CSU, it is strongly negative toward the populist AfD. The second cluster (turquoise) also fails to display a clear pattern of ideological polarization, as it exhibits moderate attitudes toward all parties, but can be distinguished from the first cluster by its voters' moderately warm attitudes toward the AfD, which contrasts with the hostility that voters in the first cluster display toward it. Accordingly, in Germany it appears that what sets voters apart from one another is whether they are hostile or not toward the populist AfD, whereas attitudes toward the rest of the parties fails to clearly set voters apart, i.e., affective polarization revolved only around the populist AfD in the 2017 German election.

[20] Our alternative two-clusters solution for Netherlands, which is found to be equally plausible to the three-clusters solution presented here, also suggests that polarized attitudes toward the PVV cleaves the Dutch electorate.

The final election, that of Portugal, is characterized by a larger number of clusters (five) and not only mixes the previous patterns of ideological sorting and single-party favourability, but also provides clusters that have similar attitudes toward the full party system. Its first cluster (grey) is mostly favourable toward left-leaning parties, while its second cluster (turquoise) is uniquely favourable to the Socialist Party (PS), the country's main left-leaning party and its third cluster (red) exhibits favourability toward right-leaning parties. Finally, the fourth cluster (green), is characterized by its moderate favourability toward all parties, while the fifth cluster (blue) can be conceived as profoundly cynical, displaying negative attitudes toward all parties. Whether the larger number of clusters found in this election represents a true characteristic which sets apart Portugal from other European party systems or rather reflects an idiosyncrasy of this specific election remains to be seen through additional empirical analyses.

Despite the peculiarities of the Portuguese case, the results are generally supportive of H1, as two clusters that map onto ideological divides are found in all but the German election (with Austria providing a slightly more ambiguous case). While Portugal also provides a more nuanced case, the analysis nevertheless identifies ideological clusters, although these are not exhaustive as other, non-ideologically aligned clusters are also identified. Turning to H2, it is also mostly supported by the results, yet in a more qualified way, as the analysis identifies a separate, pro-populist cluster in four out of the eight elections with a populist party. This latter cluster generally supplements the left/right affective polarization divide. In other cases, populist parties fail to create a separate cleavage and are rather integrated into ideological clusters.

The results of the clustering analysis provide valuable insights to understand patterns of affective polarization in Europe. They suggest that in most Western European countries, polarization might revolve around ideological competition, with populist parties having the

potential to create an additional cleavage in some countries. The main conclusion to take from this analysis, which reinforces that of Kekkonen and Ylä-Anttila (2021), is that affective polarization in Europe does not revolve around a single party being perceived favourably as it does in the United States. If that were the case, the results of the clustering analysis would find as many clusters as there are parties in each election, with each cluster being favourable toward a single party and unfavourable toward all others. Rather, in the Western European elections in this study, citizens exhibit favourability toward multiple parties at once, except for populist parties whose supporters tend to be unfavourable toward the rest of the partisan landscape and behave more like a social identity approach to partisanship would suggest. This is a critical difference with affective polarization in the United States, where polarized voters' hostility and favourability are both targeted at a single party. In contrast, in Western Europe, affective polarization also maps onto ideological lines, but there are typically more than a single party that falls on a given side of the ideological spectrum and these are perceived similarly by voters, likely in accordance with their own ideological preferences. This is a critical difference that the binary in-group/out-group operationalization based on party identification that has become commonplace in American studies of affective polarization fails to capture. The complex nature of affective polarization in multiparty system is further complexified by the presence of populist parties, which tend to create an additional pole of polarization.

4.4. Roots of affective polarization

The second part of this analysis furthers my investigation into the potential differences between affective polarization in the United States and Europe by turning our focus on the roots

of the phenomenon. The applicability of the policy-driven and the group-driven mechanisms have not yet been simultaneously tested in non-American cases. This section does so by focusing on the issue of immigration and ethnic group identities in Western European elections.

4.4.1. Modelling Approach

My empirical test relies on four ordinary least squares (OLS) models. Each observation is a voter's affective polarization toward a party; thus voters count for multiple observations (a voter being questioned about n parties makes for n observations). The measure AP of affective polarization presented earlier is used as outcome variable in all regression models. These models incorporate variables that allow me to test H3 and H4, along with sociodemographic information about the voters and party characteristics. Formally, the four models take the following form:

$$\begin{aligned} AP_{ij} = \quad & \beta_1 PID_{ij} + \beta_2 PartyIdeo_j + \beta_3 Nativism'_i + \beta_4 SocialSort_j + \beta_5 ImmigAtt'_i + \\ & \beta_6\left(PartyIdeo_j * Nativism'_i\right) + \beta_7\left(SocialSort_j * ImmigAtt'_i\right) + \\ & \mathbf{x_j} + \mathbf{x_i} + \boldsymbol{\alpha} + \varepsilon_{ij} \end{aligned}$$

for respondent $i = 1, \dots, I$ and party $j = 1, \dots, J$. Our main predictors are explicitly listed in the model, with PID constituting a binary variable indicating whether respondent i identifies with party j, $PartyIdeo$ capturing party j's position on the issue of immigration, and $Nativism'$ representing respondent i's position on the same issue. Following Hainmueller et al.'s important insights on the risks of assuming a linear interaction effect between continuous covariates (Hainmueller et al., 2019), $Nativism$ is binned in five groups based on its quintiles, yielding the categorical variable $Nativism'$, entered in the models as a set of dummy variables. $SocialSort$ captures the amount of social sorting within the partisan base of party j, operationalized as the proportion of the party's partisans who were born in Western world countries (Western Europe,

New Zealand, Australia and North America excluding Mexico), standardized by the overall proportion of western-born respondents in country k.[21] Formally, let $WB = 1$ for respondents who were born in Western world countries and $WB_i = 0$ otherwise. Let $PID_{ij} = 1$ for respondents who identify with party j and $PID_{ij} = 0$ otherwise. Then, social sorting is computed as

$$SocialSort_j = \frac{\frac{\sum_{i=1}^{I} WB_i \ \forall i \text{ where } PID_{ij} = 1}{\sum_{i=1}^{I} PID_{ij}}}{\sum_{i=1}^{I} WB_i \text{ in country } k}$$

which yields an indicator of how much western-born respondents cluster within a party that is comparable across elections given the standardization I apply to it. The measure thus represents the extent to which the party caters to non-Western-born voters, a proxy that voters are likely to use to infer which social groups parties stand for.[22] $ImmigAtt'$ represents attitudes toward immigrants and is also binned in five groups based on its quintiles and entered in the models as a set of dummy variables. Finally, $\mathbf{x_j}$ represents a vector of party-level characteristics (vote share percentage in the current election and party's family), $\mathbf{x_i}$ represents a vector of respondent sociodemographic indicators (education, gender and age), $\boldsymbol{\alpha}$ represents a vector of election fixed effects and ε_{ij} is an idiosyncratic error term.

Two interaction terms are included in the model to test H3 and H4. The interaction between $PartyIdeo$ and $Nativism'$ allows me to test H3, which states that greater (lower) policy proximity between a voter and a party leads to warmer (colder) affective evaluations of the party. I thus expect that the marginal impact of the party's position on immigration – captured by $PartyIdeo$ – will be dependent upon the voter's own position on the issue, justifying the interaction between

[21] On average, there are 277 foreign-born respondents within each country, with a low of 52 in the Italian sample and a high of 1,105 in the German sample of the data.
[22] Ideally, the analysis could have used a measure of voters' ethnic background, but such measure was not available, and country of residence proved to be the best proxy.

the two variables. The second interaction term, between $SocialSort$ and $ImmigAtt'$, tests H4, which states that voters' affective evaluations of parties will be consistent with their affective evaluations of groups they are aligned with. Accordingly, I expect that the marginal impact of the party's alignment (or lack thereof) with ethnic minority groups – captured by $SocialSort$ – will be conditional upon respondents' attitudes toward immigrants, as measured by $ImmigAtt'$. These two interactions thus enable us to test how exactly parties' features are moderated by voters' own preferences to influence their affective evaluations of parties.

Importantly, this part of the analysis would not be possible if I used more traditional measures of affective polarization. Indeed, such measures result in a single value summarizing affective polarization by election (Reiljan, 2020) or by respondent (Wagner, 2021) which makes it impossible to identify the correlates of voters' affective evaluations of each party individually. Instead, by using the dyadic party-voter measure introduced in this paper, I can use regression analysis to investigate how party characteristics relate to their affective evaluations among voters. This novel measure changes the level of analysis, switching from a voter-level measure to a more granular party-voter dyadic measure enabling me to study the impact of policy proximity and group favourability on affective polarization. This measure results in a substantially larger number of observations than traditional ones, which enhances the statistical power of the analysis, allowing it to focus on specific subpopulations and to assess how voters may potentially evaluate parties in different ways rather than looking for overall patterns.

Given that respondents are included in the sample as multiple observations (one observation for each party like-dislike score), standard-errors are clustered at the respondent-level. Finally, given that I have four models (one for each of the four measures of parties' stance on immigration), I use a model averaging technique to simplify the presentation of the results (see

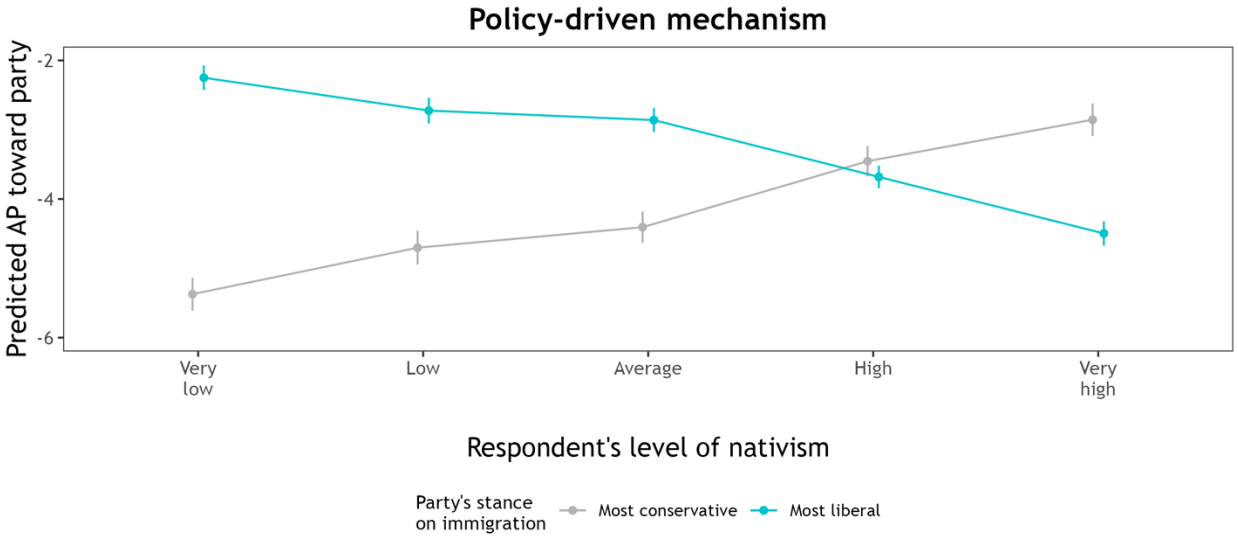


***Figure 4.3**: model averaged predicted affective polarization toward parties conditional on respondent's level of nativism and parties' stance on immigration. Vertical bars represent .05 confidence intervals based on clustered standard-errors.*

Claeskens and Hjort, 2008). Point predictions along with their standard-errors are generated from each of the four models and averaged together, with each model's predictions being weighed evenly. All four models provide nearly identical results, which are presented separately in Appendix E.

4.4.2. Results

The results are presented as predicted values plots, with the full regression tables shown in Appendix F. I first present the empirical test of the policy-driven perspective (H3) in Figure 4.3, where the y-axis represents the predicted level of affective polarization toward a party, with higher values indicating that the respondent has a warm evaluation of the party, while lower values correspond to greater hostility. Respondents' level of nativism is presented on the x-axis, with a predicted values in turquoise representing their predicted level of affective polarization toward a party with the most liberal position on the issue of immigration, and another set of predicted values

– in grey – representing respondents' predicted level of affective polarization toward a party with the most conservative position on the issue of immigration. Considering that I use the minimum and maximum values of parties' position on the issue, the trends identified should be interpreted as displaying the largest possible effect.[23]

To find support for H3, we should find that as respondents' level of nativism increases, their evaluations of parties that are most conservative on the issue of immigration become more positive, and vice versa for parties that are more liberal vis-à-vis immigration. Importantly, for these expectations to be borne out, voters need to be aware of parties' positions on the issue, which may be a challenging task in the context of multiparty systems, given that voters have more parties to gather information on. We can expect voters to be more aware of parties' positions in countries where the issue is particularly salient (e.g., Netherlands), but also to have an uneven understanding of how parties position themselves, based on ownership of the issue (e.g., most German voters are likely to know where the AfD stands on the immigration/nativism issue, but may have a more ambiguous understanding of where its centrist competitors stand). The analysis allows to identify high-level patterns that provide a sense of the roots of affective polarization across Europe, but it remains important to underscore that each country – and even each voter – is unique and driven by different factors. Accordingly, the analysis is intended to find whether some trends emerge across such distinctiveness, not to identify a single theory that applies across all voters and parties in Western Europe. Looking at the results, we find unequivocal support for our expectation, as voters' evaluations of conservative parties (grey) become warmer among respondents who score higher on the nativism scale while their evaluations of liberal parties (turquoise) follow the opposite trend.

[23] The use of a binning strategy where the moderator is split in quintiles ensures common support across the range of the moderating variable, thus ensuring that all effect sizes can be substantively interpreted (Hainmueller et al., 2019).

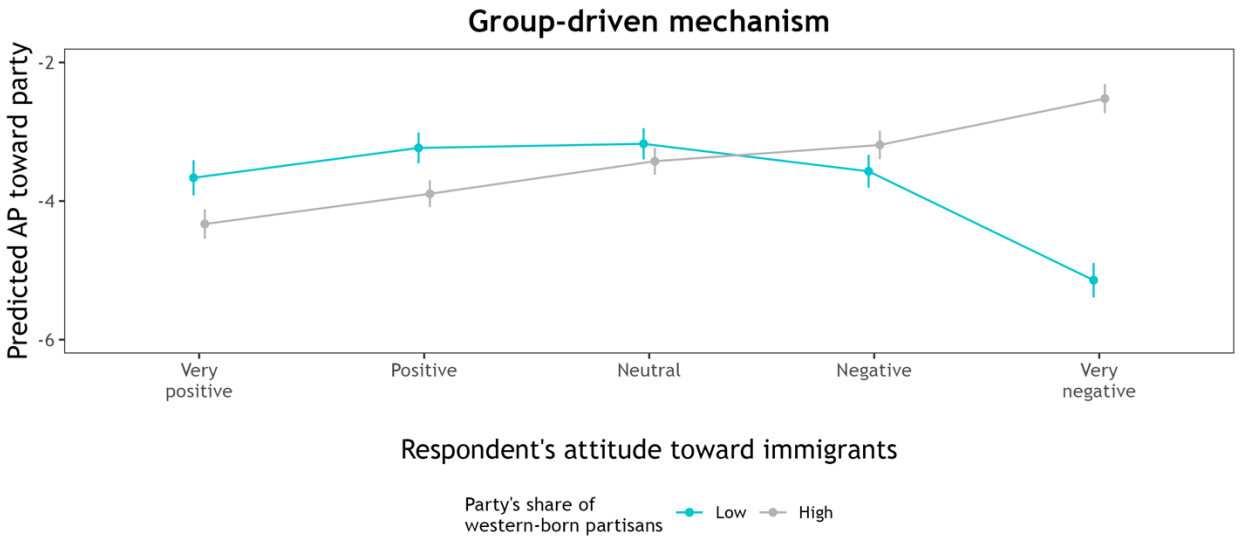


Figure 4.4*: model averaged predicted affective polarization toward parties based on respondents' attitudes toward immigrants and parties' share of western-born partisans. Vertical bars represent .05 confidence intervals based on clustered standard-errors.*

Moving to H4, the theory being tested states that individuals adjust their affective evaluations of parties to make them consistent with their feelings toward social groups that are part of their electorate. Accordingly, given this study's focus on the issue of immigration, I expect to find that respondents who have positive attitudes toward immigrants also have warm feelings toward parties in which ethnic minority respondents cluster and cooler attitudes toward parties whose electoral base is mostly devoid of such minority voters. I expect the opposite pattern among respondents with negative attitudes toward immigrants. Again, the same caveats mentioned above apply to this section of the analysis. It is very likely that social sorting matters more (and is more observable to voters) in some countries than others or among some voters. Nevertheless, finding whether such theory generally applies across Western Europe can provide important details on the commonalities (or lack thereof) that underscore affective polarization in the region.

Results are presented in Figure 4.4 and provide partial support for H4. Looking first at parties with a high share of western-born supporters (grey), these are very negatively evaluated by respondents who have positive attitudes toward immigrants, with these affective evaluations

consistently increasing as we move toward voters with more negative attitudes toward immigrants. I find an inverse relationship – albeit one that is not linear – when looking at affective evaluations of parties that have a comparatively lower share of western-born partisans (turquoise), as those are much more negatively perceived by respondents with negative attitudes toward immigrants.

Interestingly, it appears that affective polarization is mostly driven by voters with very negative attitudes toward immigrants, as these are the type of voters that display – by far – the greatest difference in their affective evaluations of parties with a high share of western-born partisans (grey) and those that cater to a more diverse partisan base (turquoise). Voters who are very positive toward immigrants do not express such polarization, as their evaluations of the two types of parties are much more similar. This finding echoes that of Mason and Wronski (2018), who find in the American context that "identity-based politics" has more leverage over affective polarization among Republicans than Democrats. The European sample used in this study yields a similar pattern whereby affective polarization, understood here as an in-party bias, is mainly predominant among voters with a negative outlook on immigrants.

Taken together, these results provide support for H4, but it should be underscored that the relationships identified in Figure 4.4 are weaker than those identified in Figure 4.3. This is quite consequential for H5, which essentially states that social sorting and ideological polarization should have a similar relationship with affective polarization, i.e., that both relationships are in the same direction and of similar magnitude. To interpret the results in light of H5, we can compare the two turquoise lines (in Figures 4.3 and 4.4) to each other and the two grey lines to one another. Such a comparison is appropriate as the parties represented by each line are similar enough to call for a direct comparison. Indeed, the turquoise line in Figure 4.3 represents a party with a liberal stance on multiculturalism, while the turquoise line in Figure 4.4 represents a party with an

ethnically diverse partisan base. This is exactly the kind of shortcut that I expect voters to make, i.e., inferring that parties favourable to immigration cater to an ethnically diverse group of voters, and vice versa. Similarly, the grey lines compare a party that is unfavourable to immigration in Figure 4.3, and a party that caters mostly to a western-born electorate in Figure 4.4.

Comparing the lines in Figure 4.3 to their equivalent in Figure 4.4, we notice that the direction of the relationships is the same, as greater policy proximity leads to warmer party evaluations in Figure 4.3, while warmer feelings toward social groups that form part of a party's electorate also leads to warmer party evaluations. The relationship is slightly more ambiguous for parties that cater mostly to a diverse electorate (turquoise, Figure 4.4), but it remains a negative relationship, as the turquoise line in Figure 4.3. Yet, focusing on the magnitude of the relationships found in Figures 4.3 and 4.4 raises some caveats. Indeed, the relationships found for the policy-driven mechanism (Figure 4.3) appear stronger than those for the group-driven mechanism (Figure 4.4). This difference is primarily an artifact of voters with positive feelings toward immigrants not being polarized much toward both parties that cater mostly to western-born voters (grey) or those that cater to a more diverse partisan base (turquoise).

In sum, this simple comparison of results for the policy-driven mechanism and the group-driven mechanism suggests that European voters' affective evaluations of parties are similarly influenced by policy proximity and proximity in group attitudes, although we find a slightly stronger relationship between the former and affective evaluations. Again, this simple comparison does not warrant strong conclusions about the entanglement of policy considerations and group attitudes in voters' minds. Yet, it suggests that such entanglement is plausible in the broad Western European context and thus justifies more specific investigations.

Turning back to the question regarding the applicability of both the policy-driven and group-driven mechanisms to Western European cases, the results suggest that the former has a stronger connection to affective evaluations of parties than the latter. There are a few possibilities that may explain this result, the first of which may have to do with the relative importance of social identities in the American and European contexts. The lesser connection of social sorting to affective evaluations of parties possibly reflects the lower importance of social identities – particularly of immigration-related identities – in Western European electoral politics *vis-à-vis* American electoral politics. An extensive literature argues that social identities are at the core of American politics (e.g., Achen and Bartels, 2016; Berelson et al., 1954; Campbell et al., 1960; Cramer, 2016; Dawson, 1994; Green et al., 2002; Greene, 1999; Lazarsfeld et al., 1948; White and Laird, 2020) – where theories of affective polarization were developed – whereas an equal amount of studies have claimed that policy preferences – rather than social identities – are more closely tied to partisanship in European electoral politics (Butler and Stokes, 1969; Dalton, 2016; Huber, 1989; Inglehart, 1984; Medina, 2015). It is also possible that social sorting matters a lot in Western European elections too, but that the cleavage between western-born and non-western-born voters is simply not the most important to dictate affective evaluations of parties. Another potential explanation lies in the more complex nature of multiparty systems, as the group-driven perspective on affective polarization may apply more straightforwardly to simpler party systems like the United States'. Indeed, partisan alliances between voters and social groups have been relatively stable over time in the United States (Karol, 2009), which makes it easier for voters to be aware of such alliances as their knowledge of them does not need to be continuously updated. In contrast, in multiparty systems like those of Europe, party systems are less stable, as parties come and go

much quicker.[24] Such volatility in Western European party systems could possibly contribute to make electoral alliances between social groups and parties unclear to voters, as these are constantly updated through the disappearance of parties and replacement by new ones. Further, the greater the number of parties competing in an election, the harder it is for voters to develop a sound understanding of the social groups that form their electoral coalitions. Indeed, even in the comparatively simple American party system, voters are known to have middling levels of political information (Converse, 1964; Delli Carpini & Keeter, 1996). Accordingly, in considerably more complex multiparty systems, voters may simply be overwhelmed with too much information to even be aware of the social groups that form part of parties' electoral coalitions, which could potentially explain the mild relationship between group attitudes, social partisan sorting and affective polarization.

4.5. Conclusion

This study set out to test the applicability of American findings on affective polarization to Western Europe. It first sought to analyze whether the binary in-group/out-group distinction which is used to conceptualize affective polarization in the United States can also properly describe patterns of affective polarization in Western Europe. Second, it provided an empirical test of the two theories that have been put forward to account for affective polarization in the United States. By doing so, it seeks to provide insights on what aspects of the American literature on affective polarization should the comparative literature on the topic integrate, and which ones may have

[24] This higher volatility is exemplified by the fate of many parties, among which La République en Marche, a French party created in 2016 whose candidate (Emmanuel Macron) won the French presidential election in the following year, and by the Italian Five Star Movement (M5S), that rose to prominence right after its creation and is now falling into oblivion almost as quickly over a period of barely more than a decade.

limited comparative value. Finally, it set out to test whether the entanglement of the two theories that were the focus of earlier studies in this dissertation is also plausible in the European context, allowing us to glean further insights into the applicability of earlier findings of this dissertation.

To do so, the analysis relied on survey data taken from the CSES, crossed with data on parties' electoral platforms taken from the CHES and CMP datasets. It first tested the applicability of the binary in-group/out-group distinction taken from the American literature on affective polarization using a k-means clustering algorithm. The results suggest that affective polarization in Western Europe mostly relates to ideological competition, as voters can be clustered in groups that exhibit favourability toward either left- or right-leaning parties and hostility toward parties at the opposite end of the ideological spectrum. Although affective polarization also maps onto ideological divides in the United States, a critical difference emerges as voters tend to be favourable and unfavourable toward multiple parties at once, in contrast to American voters, who typically only like a single party and dislike the other (with some voters falling in between). The clustering analysis conducted in this study provides more flexibility, as it does not assume any number of clusters and rather identifies the most appropriate number of clusters by looking into similarities in voters' perceptions of parties. This inductive approach is highly valuable in the context of multiparty systems where possible patterns of polarization are much more plentiful than in two-party systems and can also evolve over time.

An additional line of cleavage – once again made visible only through the clustering analysis – was found in some cases around affective evaluations of populist parties, which can form a cleavage supplementing the left- and right-leaning clusters. This finding suggests that affective polarization follows a different pattern in the multiparty systems of Western Europe compared to the United States' two-party system. More specifically, it appears that the notion of

"tripolarization" identified in Reiljan and Ryan's (2021) study of affective polarization in Sweden also applies to some – but not all – Western European elections with populist parties. This finding invites us to re-think how we conceptualize affective polarization, as it may not only have to do with policy issues and competition between social groups but may also be related to attitudes toward electoral democracy. Indeed, supporters of populist parties appear to be united in their dislike of traditional parties, which suggests that anger and disenchantment toward the working of electoral democracy may also fuel affective polarization.

In sum, the results of the clustering analysis underscore how the binary in-group/out-group distinction used to operationalize affective polarization in the United States – based on the social identity approach to partisanship – may not well reflect the more ideological nature of polarization in Western Europe, where voters appear to consider multiple parties at once as being part of their in-group. Accordingly, future studies should use more inclusive approaches accounting for voters' favourability and hostility toward multiple parties. If not, they take the risk of "drowning" voters' dislike of certain parties by pooling them with liked parties, thus biasing levels of affective polarization downward. Similarly, if liked parties are to be grouped together, which this study suggests would be wise to do in some multiparty settings, separating parties in two ideological groups (left and right) may not be appropriate in all circumstances, especially when populist parties are present. Again, the clustering analysis conducted in this study can allow scholars to identify the number of groups in which parties should be bundled and which parties should be part of each group to properly reflect the patterns of polarization in each party system.

The second part of the analysis focused on testing the applicability of the two theories that have been put forward in the American literature to account for the growth of affective polarization. In so doing, I deviate from prior studies on the topic by taking a more granular

approach to affective polarization: rather than looking at survey respondents' overall level of affective polarization, I focus on their affective evaluations of each party. The findings of the clustering analysis justify using such an approach, as they suggest that a binary in-group/out-group distinction, which prevails in the literature, may not be appropriate to study affective polarization in Western Europe's multiparty systems, or at least not all of them. The new measure introduced in this article enables the use of regression analysis to study affective polarization, allowing me to look for heterogeneous relationships that are masked by descriptive analysis, which has mainly been used so far to study affective polarization in observational research designs. The data are analyzed using ordinary least squares regression to test 1) whether policy proximity between a voter and a party correlates with the latter's affective evaluation of the former and 2) whether evaluations of groups that are aligned with parties also correlate with affective evaluations of the latter.

The analysis finds empirical support for both the policy-driven and the group-driven perspectives, although the relationship appears stronger for the former than the latter. Indeed, looking only at the specific issue of immigration and patterns of partisan sorting among western- and non-western-born voters, I find that policy proximity is more closely connected to affective evaluations of parties than the latter's electoral alliances with majority and minority ethnic groups, further suggesting that affective polarization in Western Europe may have a more ideologically-driven – and less identity-based – foundation than in the United States. Nevertheless, the results suggest that both mechanisms are at the very least plausible in Western Europe, thus underscoring the need for more investigations on the topic, using different issues and social groups, to fully validate the precedence of policy considerations over identity considerations in Western European affective polarization.

Finally, the analysis also focused on trying to find preliminary evidence of the entanglement of both mechanisms in Western Europe. I did find evidence to suggest that the entanglement is plausible when looking strictly at the immigration issue, although the matter remains to be further investigated considering the exploratory nature of my empirical test and some preliminary findings suggesting that policy considerations may weigh more heavily in voters' minds than identity considerations – although that does not fully prevent both pieces of information from being entangled together in their information-processing.

This study moves the affective polarization literature forward in three ways. First, it demonstrates that a binary in-group/out-group operationalization of affective polarization in Western Europe may not be appropriate in all cases, as voters tend not to be warm or hostile toward a single party and rather display patterns of affective polarization that map onto ideological lines, with attitudes toward major populist parties – where they exist – providing an additional line of cleavage. Second, it provides a well-needed empirical test of the two theories that have been developed in the United States to account for affective polarization and whose applicability in other regions of the world had yet to be tested. Finally, it provides a novel measure of affective polarization that allows us 1) to identify non-binary patterns of affective polarization and 2) study heterogeneous relationships of affective polarization based upon voters' and parties' characteristics. I encourage scholars to build on this study by expanding the range of issues/social groups taken into consideration to provide more details on the relative importance of the policy-driven and group-driven mechanisms to account for the phenomenon in non-American cases.

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4.7. Appendix

Appendix A: factor analysis

Variable	Factor 1	Factor 2
Immigrants are generally good for [COUNTRY]'s economy (reversed)	**.501**	.263
Immigrants increase crime rates in [COUNTRY]	**.767**	.18
[COUNTRY]'s culture is generally harmed by immigrants	**.81**	.24
Important for being truly [NATIONALITY]: born in [COUNTRY]	.226	**.778**
Important for being truly [NATIONALITY]: to have [NATIONALITY] ancestry	.225	**.843**
Important for being truly [NATIONALITY]: To be able to speak [COUNTRY NATIONAL LANGUAGES]	.205	.201
Important for being truly [NATIONALITY]: To follow [COUNTRY]'s customs and traditions	.369	**.401**

Cronbach alpha for first factor is .77

Cronbach alpha for second factor is .76

Appendix B: summary descriptive statistics

Variable	Min.	Mean	Median	Max.	Std. Dev.
Affective polarization toward party	-10	-3.39	-3	0	3.07
Nativism: very low	0	0.16	0	1	0.37
Nativism: low	0	0.13	0	1	0.34
Nativism: medium	0	0.18	0	1	0.38
Nativism: high	0	0.29	0	1	0.45
Nativism: very high	0	0.24	0	1	0.43
Attitude toward immigrants: very positive	0	0.13	0	1	0.34
Attitude toward immigrants: positive	0	0.21	0	1	0.41
Attitude toward immigrants: neutral	0	0.23	0	1	0.42
Attitude toward immigrants: negative	0	0.21	0	1	0.41
Attitude toward immigrants: very negative	0	0.21	0	1	0.41
R born in Western World country	1	1.94	2	2	0.24
R identifies with party	0	0.11	0	1	0.31
Gender: male	1	1.51	2	2	0.5
Age: 35 and less	1	1.2	1	2	0.4
Age: 65+	1	1.3	1	2	0.46
Education: university degree	1	1.36	1	2	0.48
CHES: party supports liberal immigration policy	0.05	4.42	4.33	8.5	2.64
CHES: party supports multiculturalism	0	4.4	4.42	8.6	2.64
CHES: party supports more rights for ethnic minorities	0.12	5.01	5.42	9.29	2.51
CMP: party's balance of statements on immigration (very negative)	0	0.11	0	1	0.31
CMP: party's balance of statements on immigration (negative)	0	0.28	0	1	0.45
CMP: party's balance of statements on immigration (neither positive nor negative)	0	0.18	0	1	0.38
CMP: party's balance of statements on immigration (positive)	0	0.26	0	1	0.44
CMP: party's balance of statements on immigration (very positive)	0	0.17	0	1	0.38
Party's standardized share of western-born partisans	0.91	1.01	1.01	1.09	0.03
ln(Party's vote share)	-0.67	2.51	2.5	3.75	0.71
Party family: Christian-democratic	0	0.13	0	1	0.34
Party family: confessional	0	0.03	0	1	0.16
Party family: conservative	0	0.08	0	1	0.27
Party family: green	0	0.13	0	1	0.34
Party family: liberal	0	0.17	0	1	0.37
Party family: no family	0	0.01	0	1	0.12
Party family: radical left	0	0.09	0	1	0.29
Party family: radical right	0	0.16	0	1	0.37
Party family: regionalist	0	0.02	0	1	0.13
Party family: socialist	0	0.18	0	1	0.38
Election: Austria 2017	0	0.07	0	1	0.25
Election: Belgium 2019	0	0.09	0	1	0.29

Variable	Min.	Mean	Median	Max.	Std. Dev.
Election: Denmark 2019	0	0.12	0	1	0.33
Election: France 2017	0	0.08	0	1	0.27
Election: Germany 2017	0	0.22	0	1	0.42
Election: Great Britain 2017	0	0.05	0	1	0.23
Election: Netherlands 2017	0	0.24	0	1	0.43
Election: Italy 2018	0	0.04	0	1	0.2
Election: Portugal 2019	0	0.08	0	1	0.28

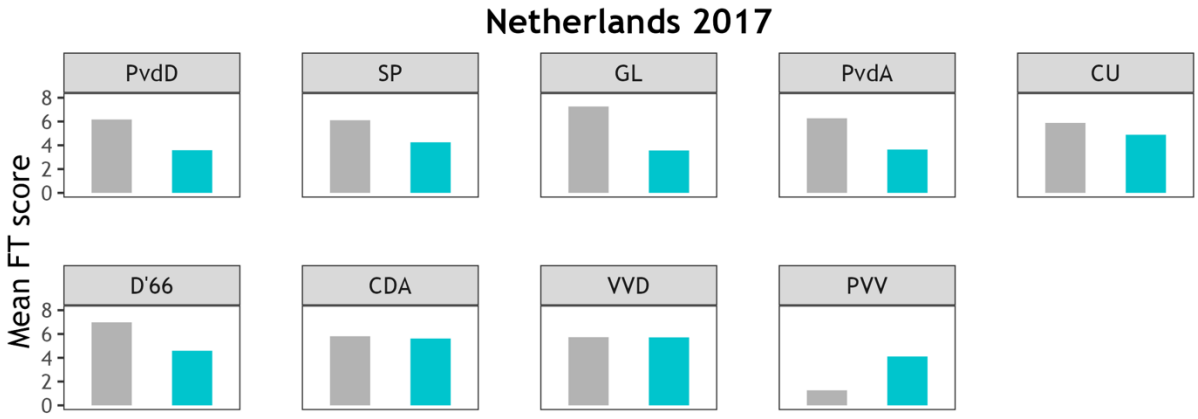
Table 4.1*: Summary descriptive statistics.*

Appendix C: optimal number of clusters analysis

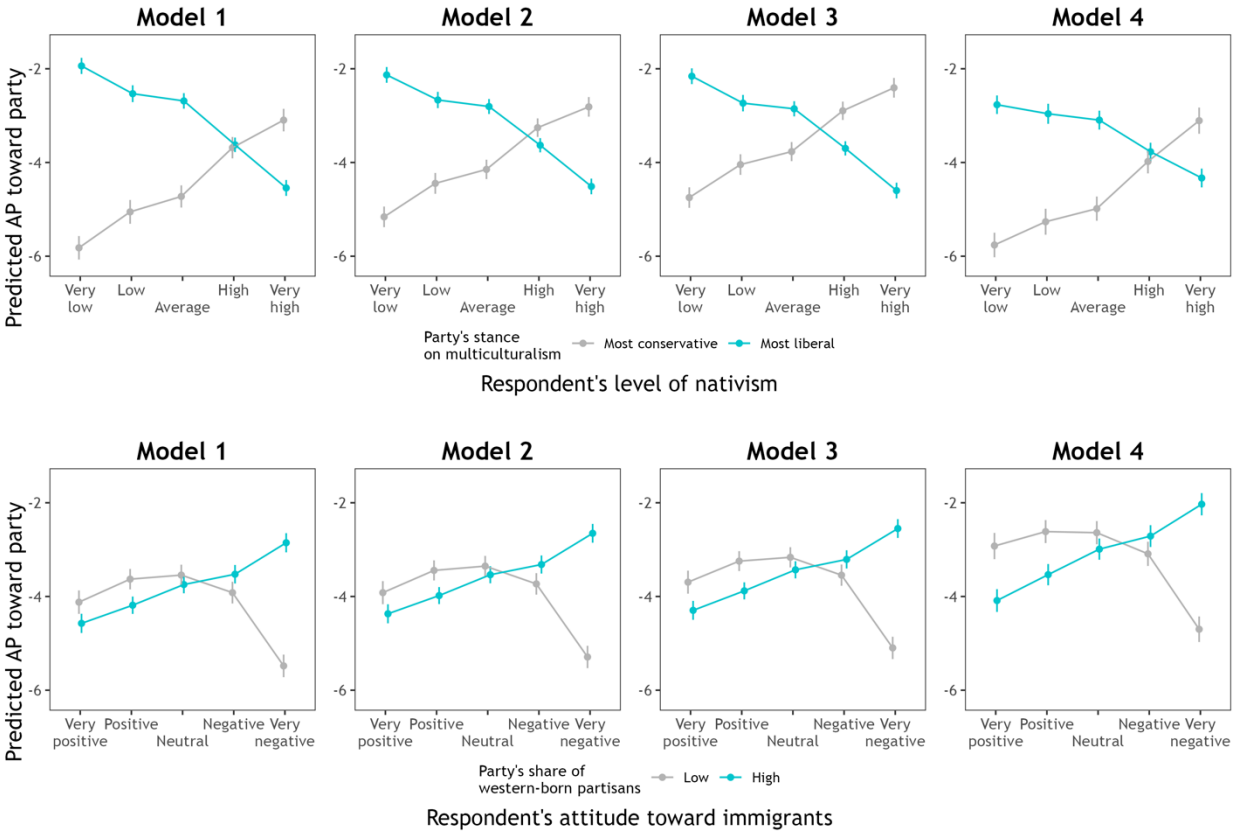
Election	2 clusters	3 clusters	4 clusters	5 clusters	6 clusters	7 clusters	8 clusters	9 clusters	10 clusters
Austria 2017	**11**	9	0	0	1	1	0	1	1
Belgium 2019	**11**	4	5	0	0	0	1	1	1
Denmark 2019	**12**	4	0	3	0	1	0	1	2
France 2017	5	**9**	0	0	5	1	1	1	1
Germany 2017	**9**	5	0	7	0	0	0	1	2
Great Britain 2017	**10**	1	2	1	5	0	1	1	2
Italy 2018	6	**9**	2	0	2	0	1	1	2
Netherlands 2017	**7**	**7**	3	0	0	4	1	1	0
Portugal 2019	5	6	0	**9**	0	0	0	1	2

Table 4.2*: count of indices that favour a certain number of clusters for each election in the sample. The number of clusters with the majority vote is indicated in boldface. Algorithm evaluated numbers from 2 to 10 clusters.*

Appendix D: alternative clustering results – Netherlands 2017



Appendix E: separate model results



Appendix F: Full regression results

	Model 1	Model 2	Model 3	Model 4
R identifies with party	3.157 (0.025)	3.159 (0.025)	3.159 (0.026)	3.168 (0.026)
Nativism: low	0.722 (0.096)	0.785 (0.107)	0.704 (0.096)	0.496 (0.121)
Nativism: medium	1.023 (0.090)	1.121 (0.101)	0.981 (0.090)	0.775 (0.112)
Nativism: high	1.924 (0.085)	2.189 (0.095)	1.852 (0.085)	1.782 (0.110)
Nativism: very high	2.377 (0.093)	2.798 (0.104)	2.343 (0.094)	2.653 (0.126)
CHES: party supports liberal immigration policy	0.359 (0.013)			
Attitude toward immigrants: positive	0.907 (1.068)	1.010 (1.067)	0.614 (1.067)	-0.912 (1.088)
Attitude toward immigrants: neutral	-0.766 (1.110)	-0.675 (1.111)	-1.144 (1.110)	-3.775 (1.120)
Attitude toward immigrants: negative	-4.134 (1.183)	-4.022 (1.183)	-4.537 (1.181)	-7.878 (1.184)
Attitude toward immigrants: very negative	-16.821 (1.221)	-16.762 (1.221)	-17.148 (1.219)	-20.930 (1.221)
Party's standardized share of western-born partisans	-2.478 (0.858)	-2.488 (0.854)	-3.307 (0.851)	-6.394 (0.875)
ln(Party's vote share)	0.316 (0.019)	0.361 (0.020)	0.288 (0.019)	0.279 (0.021)
Education: university degree	-0.082 (0.034)	-0.082 (0.034)	-0.082 (0.034)	-0.076 (0.034)
Gender: male	-0.082 (0.031)	-0.078 (0.031)	-0.080 (0.031)	-0.082 (0.031)
Age: 35 and less	0.152 (0.040)	0.149 (0.040)	0.151 (0.040)	0.153 (0.041)

	Model 1	Model 2	Model 3	Model 4
Age: 65+	-0.189 (0.037)	-0.190 (0.037)	-0.191 (0.037)	-0.193 (0.037)
Election: Austria 2017	-0.787 (0.083)	-0.851 (0.083)	-0.984 (0.083)	-1.465 (0.086)
Election: Belgium 2019	-0.518 (0.089)	-0.535 (0.089)	-0.627 (0.089)	-0.760 (0.091)
Election: Denmark 2019	-1.015 (0.080)	-0.972 (0.082)	-1.127 (0.081)	-1.131 (0.085)
Election: France 2017	-1.127 (0.085)	-1.111 (0.087)	-1.243 (0.086)	-1.848 (0.090)
Election: Germany 2017	-0.917 (0.075)	-0.840 (0.076)	-0.972 (0.076)	-1.093 (0.077)
Election: Great Britain 2017	-0.908 (0.089)	-0.938 (0.089)	-0.908 (0.089)	-1.253 (0.091)
Election: Italy 2018	-0.308 (0.102)	-0.289 (0.101)	-0.336 (0.102)	-0.831 (0.104)
Election: Netherlands 2017	-0.377 (0.076)	-0.305 (0.078)	-0.493 (0.077)	-0.683 (0.079)
Party family: confessional	-0.008 (0.061)	0.012 (0.060)	0.054 (0.060)	0.139 (0.061)
Party family: conservative	-1.029 (0.052)	-0.926 (0.052)	-1.099 (0.051)	-0.917 (0.051)
Party family: green	-0.496 (0.048)	-0.616 (0.048)	-0.344 (0.048)	-0.070 (0.046)
Party family: liberal	-0.369 (0.035)	-0.453 (0.036)	-0.364 (0.035)	-0.133 (0.037)
Party family: no family	-0.929 (0.111)	-0.769 (0.111)	-0.849 (0.111)	0.074 (0.114)
Party family: radical left	-0.750 (0.051)	-0.858 (0.051)	-0.648 (0.050)	-0.548 (0.046)
Party family: radical right	-2.286 (0.048)	-2.022 (0.054)	-2.490 (0.048)	-1.648 (0.056)
Party family: regionalist	-0.602 (0.087)	-0.550 (0.088)	-0.708 (0.087)	-0.775 (0.093)

	Model 1	Model 2	Model 3	Model 4
Party family: socialist	-0.371 (0.038)	-0.462 (0.039)	-0.292 (0.038)	-0.093 (0.037)
Nativism: low × CHES: party supports liberal immigration policy	-0.148 (0.017)			
Nativism: medium × CHES: party supports liberal immigration policy	-0.200 (0.016)			
Nativism: high × CHES: party supports liberal immigration policy	-0.403 (0.015)			
Nativism: very high × CHES: party supports liberal immigration policy	-0.560 (0.016)			
Attitude toward immigrants: positive × Party's standardized share of western-born partisans	-0.475 (1.058)	-0.571 (1.058)	-0.181 (1.057)	1.342 (1.078)
Attitude toward immigrants: neutral × Party's standardized share of western-born partisans	1.466 (1.100)	1.377 (1.100)	1.841 (1.100)	4.464 (1.109)
Attitude toward immigrants: negative × Party's standardized share of western-born partisans	4.752 (1.172)	4.647 (1.172)	5.154 (1.171)	8.479 (1.173)
Attitude toward immigrants: very negative × Party's standardized share of western-born partisans	16.987 (1.208)	16.936 (1.208)	17.313 (1.206)	21.062 (1.208)
CHES: party supports more rights for ethnic minorities		0.424 (0.015)		
Nativism: low × CHES: party supports more rights for ethnic minorities		-0.148 (0.018)		
Nativism: medium × CHES: party supports more rights for ethnic minorities		-0.201 (0.017)		
Nativism: high × CHES: party supports more rights for ethnic minorities		-0.417 (0.016)		
Nativism: very high × CHES: party supports more rights for ethnic minorities		-0.582 (0.017)		
CHES: party supports multiculturalism			0.301 (0.013)	
Nativism: low × CHES: party supports multiculturalism			-0.149 (0.017)	
Nativism: medium × CHES: party supports multiculturalism			-0.195 (0.016)	

	Model 1	Model 2	Model 3	Model 4
Nativism: high × CHES: party supports multiculturalism			-0.394 (0.015)	
Nativism: very high × CHES: party supports multiculturalism			-0.556 (0.016)	
CMP: party's balance of statements on immigration (negative)				1.910 (0.090)
CMP: party's balance of statements on immigration (neither positive nor negative)				2.750 (0.112)
CMP: party's balance of statements on immigration (positive)				3.026 (0.109)
CMP: party's balance of statements on immigration (very positive)				2.993 (0.113)
Nativism: low × CMP: party's balance of statements on immigration (negative)				-0.041 (0.131)
Nativism: medium × CMP: party's balance of statements on immigration (negative)				-0.042 (0.121)
Nativism: high × CMP: party's balance of statements on immigration (negative)				-0.759 (0.118)
Nativism: very high × CMP: party's balance of statements on immigration (negative)				-1.559 (0.133)
Nativism: low × CMP: party's balance of statements on immigration (neither positive nor negative)				-0.719 (0.147)
Nativism: medium × CMP: party's balance of statements on immigration (neither positive nor negative)				-0.945 (0.134)
Nativism: high × CMP: party's balance of statements on immigration (neither positive nor negative)				-2.032 (0.129)
Nativism: very high × CMP: party's balance of statements on immigration (neither positive nor negative)				-3.125 (0.151)
Nativism: low × CMP: party's balance of statements on immigration (positive)				-0.835 (0.145)
Nativism: medium × CMP: party's balance of statements on immigration (positive)				-1.200 (0.133)

	Model 1	Model 2	Model 3	Model 4
Nativism: high × CMP: party's balance of statements on immigration (positive)				-2.537 (0.131)
Nativism: very high × CMP: party's balance of statements on immigration (positive)				-4.051 (0.149)
Nativism: low × CMP: party's balance of statements on immigration (very positive)				-0.689 (0.161)
Nativism: medium × CMP: party's balance of statements on immigration (very positive)				-1.104 (0.150)
Nativism: high × CMP: party's balance of statements on immigration (very positive)				-2.786 (0.146)
Nativism: very high × CMP: party's balance of statements on immigration (very positive)				-4.217 (0.159)
(Intercept)	-2.610 (0.901)	-3.245 (0.902)	-1.339 (0.893)	0.754 (0.910)
Observations	62245	62245	62245	62245
R^2	0.259	0.259	0.258	0.267
RMSE	2.64	2.64	2.64	2.62

Table 4.3*: Entries are unstandardized OLS cofficients with standard-errors clustered at the respondent-level in parentheses.*

5. Conclusion

The main substantive conclusion emerging from this dissertation is that the patterns and findings about the roots of affective polarization that have been identified in previous works may hide an additional layer of complexity that is uncovered when accounting for voters' use of heuristics. The human mind is of great complexity and while the theories that have so far been put forward to account for the development of affective polarization among voters do not appear to be wrong, they may paint a simplified picture of reality. Both ideological polarization and social sorting appear to matter and foster hostility across party lines, but the way they operate is not straightforward. Their impact has so far mainly been depicted in a linear fashion, where voters are claimed to be exposed to parties' policy commitments or group appeals, to then compare those with their own attitudes and finally adjust their affective evaluations of the parties based on the perceived proximity between them and the parties. This mechanism fails to account for voters' limited political interest and knowledge. Most citizens have little political information and are thus unlikely to have a sound understanding of parties' policy commitments and group favourability. Voters themselves often do not have clear preferences on important issues. Accordingly, to compare parties' policy commitments and group attitudes to their own preferences, they are likely to resort to using a variety of cognitive shortcuts to simplify their task. The first two studies of this dissertation put the spotlight on such heuristics, investigating the possibility that parties' policy commitments and group appeals may be used interchangeably by voters.

The first study uses a priming experiment design and takes advantage of the newfound popularity of the Quebec Conservative Party (QCP) during the latest provincial election, held in 2022, to assess the strength of heuristics used to process political information and relate them to affective evaluations of political parties. The analysis focuses on an emerging party to overcome

the impact of the partisan heuristic, which may prove to be the strongest heuristic of all and thus diminish the perceived impact of the heuristic mechanism that this dissertation focuses on. Although results are mixed, I do find some evidence supporting the potential use of the heuristic mechanism among Quebec voters. When exposed to group appeals, respondents were found to extrapolate beyond the group appealed to and assume that the QCP was favourable to other groups with similar preferences and unfavourable to groups with conflicting preferences. I also found evidence suggesting that participants adjusted their affective evaluations of the party based on the group favourability that they inferred from the party's policy commitment being primed.

While the evidence provides only partial support for my expectations, it is possible that idiosyncrasies related to the QCP and the nature of the experiment explain the mixed nature of the findings. The QCP had gained significant popular support by being very vocal of its opposition to many sanitary measures implemented during the COVID-19 pandemic, filling a void created by all provincial parties being mostly supportive of those measures. Accordingly, come election time, it may have carved itself such a specific niche that it could potentially be seen as a single-issue party by many or even most voters. If that were the case, then any additional information, such as that provided in the priming experiment, could have been discarded by many voters as being irrelevant. Another potential limitation related to the study's focus on the QCP lies in the party having extremely low average affective scores among voters, far below any other party, thus creating a floor effect where, for many voters, there was little room for their perception of the QCP to become any worse. Speaking to the potential lack of statistical power of the experiment, most of the treatment effects run in the expected direction, warranting additional tests of the mechanism using a different experimental design.

Considering the challenges associated with testing the heuristic mechanism in a "real world" setting – i.e., using an existing party during a real election – my second study circumvents the issue by using a pre-registered vignette experiment design focusing on fictitious independent candidates. Using a full Canadian sample and focusing on federal elections, respondents were presented with four vignettes – three of which were experimentally manipulated – providing them again group appeals and policy commitments, but this time from fictitious candidates. Overcoming the limitations of the first study proved critical, as the results of this second study provide unqualified support for the expectations derived from the heuristic mechanism. Respondents inferred candidates' policy commitments when exposed to their group appeals and inferred their group favourability when exposed to their policy commitments. Also, they adjusted their affective evaluations in line with the inferences that they drew from the vignette they were presented. Taken together, the results of the first two experiments provide significant support for the heuristic mechanism, which suggests that current theories accounting for the development of affective polarization among voters may be improved by accounting for citizens' use of heuristics.

Although this second study takes this project a great step forward, it also faces important limitations. Importantly, it has limited external validity by focusing on fictitious independent candidates. Independent candidates are uncommon in Canadian elections given the strength of partisan labels to orient voters' choice (Gidengil et al., 2012). Accordingly, while the heuristic mechanism appears to operate when tested in a highly controlled environment, its applicability and the strength of its effect remains to be further investigated in a real-world setting given the caveats associated with the findings of the first study. Further, the first two studies take place in the Canadian setting, whereas one of the major objectives of this dissertation is to analyze the broad applicability of the concept in multiparty systems outside of the United States.

Contributing to address both limitations, the third study presented in this dissertation focuses on multiple Western European multiparty systems and does so through observational data. This final study investigates the applicability of American-based theories and operationalizations of affective polarization in other contexts, although it also keeps an eye on the heuristic mechanism that is the focus of the two prior studies. The results yield several important conclusions. An innovative clustering analysis suggests that affective polarization in multiparty systems may not only revolve around two ideologically opposite partisan poles – as it does in the United States – but may also in some cases include a third polarization pole around populist parties, a pattern known as "tripolarization" (Reiljan and Ryan, 2021). Further, it appears that voters' in-groups and out-groups may combine multiple parties, something that is again very different from the American reality but joins other studies finding patterns of affective polarization that map onto ideological camps in Western Europe (Bantel, 2023, Kekkonen and Ylä-Anttila, 2021).

These findings have important methodological implications, as they suggest that operationalizations such as that which prevails in the United States where, for each voter, parties are categorized in one of two groups – in-group and out-group – may be inappropriate. Indeed, a binary distinction may obscure the fact that more than two poles of polarization potentially exist. This issue is further enhanced if the in-group is defined based on partisanship, as Western European voters appear to harbour positive sentiments toward multiple ideologically compatible parties.

Testing the capacity of American-based theories of affective polarization to extrapolate beyond the country's borders, the analysis finds evidence suggesting that both the policy-driven and group-driven mechanisms could apply to Western Europe. Circling back to the findings of the two prior studies, this third investigation also identifies some preliminary evidence suggesting that

both the policy-driven and group-driven mechanisms may be interconnected in voters' minds. Accordingly, the caveats raised by my theoretical discussion on the ubiquitous use of heuristics among voters – and its impact on theories of affective polarization – are further substantiated by this third study.

Taken together, these three studies offer important insights for our understanding of affective polarization, with some of these also applying to the study of political behaviour more broadly. The first important insight has to do with the strength of heuristics and their impact on the political cognition of citizens. Although political information abounds, especially during electoral campaigns, extensive research shows that citizens lack the time, interest and commitment to fully process political information and adjust their opinions accordingly (Delli Carpini & Keeter, 1996; Downs, 1957). The significance and impact of heuristics is often highlighted in the process of political decision-making, notably during elections, but this dissertation underscores that heuristics also matter even at a more emotional level, in citizens' affect toward political parties and their representatives. Whenever citizens' cognition is being theorized, we should consider how heuristics come into play, or our theories run the risk of depicting a simplified and inaccurate picture of reality.

Another important take-away emerges from this project. The concept of affective polarization was found to be applicable in a wide variety of setting. It accurately reflects the polarized landscape of Quebec in the first study, also captures polarization on salient issue across Canada in the second study, all the while capturing polarization on a single issue of importance across Western Europe in the third study. Accordingly, at three different levels of analysis – subnational, national and regional – the concept was found to be applicable outside of the United States. Through this finding, this dissertation joins the emerging comparative body of literature on

affective polarization and lends it further credence (Algara & Zur, 2023; Bantel, 2023; Comellas and Torcal, 2023; Gidron et al., 2019; Gidron et al., 2022; Gidron et al., 2023; Harteveld, 2021a; Harteveld, 2021b; Hernández et al., 2021; Kekkonen and Ylä-Anttila, 2021; Reiljan, 2020; Rekker and Harteveld, 2022; Wagner, 2021; Ward and Tavits, 2019; Westwood et al., 2018).

Yet, this doctoral project also caveats the comparative value of the concept regarding its operationalization. The binary distinction between in-party and out-party based on voters' partisan identification, as commonly used in the American context, appears to be flawed for multiparty systems – at least in the Western world political systems that were in-scope for this dissertation. The first and third studies showed how voters in multiparty systems tend to have positive sentiments toward multiple ideologically compatible parties, in stark contrast to the American political system where positive affect is typically concentrated on a single party. This important distinction makes partisanship a misleading boundary between in-group and out-group, as it lumps together liked and disliked parties in the out-group and artificially reduces the in-group to a single party. In doing so, such boundary fails to reflect how citizens in multiparty systems see the political landscape. A much better approach is to group parties (and their partisans) based on ideological compatibility, with populist parties kept aside as a separate group, as my analysis supports the conclusions of prior studies claiming that affective polarization maps onto the left/right divide, with radical right/populist parties constituting a third pole of polarization (Bantel, 2023; Gidron et al., 2023; Reiljan and Ryan, 2021). Importantly, the third study in this dissertation also highlights how ideological compatibility is contextual and varies by country, another important nuance underscored by recent comparative studies (Bantel, 2023; Gidron et al., 2023). Whether populist parties foster a third pole of polarization and whether centrist parties align more with left-leaning or right-leaning parties are all open questions to which there is no single answer.

These considerations do not mean that affective polarization cannot be studied in multiparty systems, far from it as this dissertation demonstrates. What these caveats mean is that we should prioritize flexible operationalization strategies that do not impose unjustified modeling assumptions. We should export the concept and use it for comparative purposes, but we should do so in a way which is mindful of the important contextual differences which set our cases apart (Sartori, 1970). Our use of the concept of affective polarization in comparative contexts might not have been specific enough. The literature has so far replicated American-based operationalizations of affective polarization that may not appropriately capture the reality of multiparty systems. In many ways, this conclusion speaks to the everlasting debate between the value of broad comparative analyses using standardized approaches and more fine-grained, contextually informed analyses (see Brady and Collier, 2010; Coppedge, 1999; King et al., 1994; Mahoney, 2007; Przeworski and Teune, 1970; Schwartz-Shea and Majic, 2017). This dissertation takes a middle ground between these two extremes, emphasizing the comparative value of affective polarization as a concept while stressing the need to operationalize it in flexible ways to properly capture the nature of polarization, which varies profoundly across political systems.

Finally, my dissertation also has a few limitations that future studies should address to further our understanding of affective polarization. Importantly, this dissertation focuses on the strength of heuristics but does so by trying to circumvent the impact of the strongest heuristic of all: partisanship. The first study does so by focusing on a relatively unknown party whose partisan label had little value to respondents, while the second study does so by focusing on fictious independent candidates. The rationale for doing so was to create a most likely scenario, where as much room as possible would be left for policy and group identities to operate as heuristics. This objective was achieved by decreasing the value of partisanship as a heuristic, i.e., creating

experiments where participants could gain as little information as possible from partisan labels and would thus have to use other pieces of information as heuristics. While this contributed to helping us learn about the value of policy and group identities as heuristics in a context where complementary information is limited, it also challenges the external validity of experiments that were conducted. These two studies having demonstrated the value of the heuristic mechanism in a context of limited complementary information, I encourage subsequent studies to focus on measuring the strength of the heuristic mechanism in a context where partisan labels also contribute to help voters draw inferences about parties and candidates.

This doctoral research project also deviates from prior studies by taking a micro-level approach and studying voters' affective evaluations of parties and candidates rather than studying directly the macro-level phenomenon of affective polarization. While there were important and valuable reasons for doing so, it does create a gap between the empirical studies presented in this dissertation and most of the literature on the topic, as I do not speak to affective polarization directly, but rather to voters' affective evaluations of individual parties and candidates. This is a tension that emerges from the affective polarization literature focusing on the aggregate phenomenon – societies becoming more polarized – while the heuristics literature that I bring to the center of my work rather focuses on the individual-level psychology underlying citizens' political information processing. Bringing these two literatures together therefore creates an inevitable dilemma, where I needed to "distort" one of them by switching it to a different level of analysis. I considered that the affective polarization literature was the most amenable for this switch of level of analysis, but the absence of studies having investigated affective polarization at the individual-level is itself a gap that should be filled by future studies. Most topics within the political behaviour literature are typically studied at both the micro and macro-levels, such as vote

choice, partisanship, political engagement or political attitudes. This dissertation has shown that it is also possible to study affective polarization at the individual-level and I encourage other studies to follow this approach to provide us a more fulsome understanding of the phenomenon. Nevertheless, I also acknowledge the gap between the current state of the affective polarization literature and my research on it, and I therefore encourage others to also study the impact of heuristics on affective polarization through a macro-level approach.

At a higher level, this dissertation speaks to the challenges and the risks associated with developing very parsimonious theories (see Hall, 2003; Hayek, 1967; Przeworski and Teune, 1970). Both the policy-driven and group-driven mechanisms to account for affective polarization constitute such theories, where only a few variables come into play and are connected through largely simple, unidirectional relationships. There are indeed well-known advantages to such theories. They are straightforward, leave little room for interpretation, can readily be tested in a roughly identical manner across a variety of geographical settings – with a similarly large range of empirical approaches – and can be of explanatory value to a large array of cases. Focusing only on certain causal factors and leaving other, less central ones aside can also be harmless in some cases, as social phenomena are of an incredibly complex nature, with many causal forces having non-zero, yet substantively marginal impacts (Coppedge, 1999). Further, if our theories had to account for all variables that potentially come into play in a causal relationship, then their comprehensiveness would render them impossible to operationalize empirically and would also make them so specific that they would be of explanatory to only a small number of cases that fit neatly into their rigid parameters (Coppege, 1999: 467).

Yet, these parsimonious theories remain simplifications of an otherwise considerably more complex reality. An important task thus lies in finding the right balance between parsimony and

comprehensiveness. This dissertation argues that the affective polarization literature might not have found the right balance, tilting too heavily toward parsimony. In doing so, important considerations over how voters process political information are left aside and theories are potentially wrong in pointing toward a single culprit in either policy preferences or group attitudes. The way voters process political information is complex and can only be simplified so much before theories become shortsighted. Even the more comprehensive mechanism that I present in this dissertation also chooses parsimony to a significant extent. Some important considerations were left aside under the guise that they would not alter the conclusions from the three empirical studies. Of greatest importance, partisanship has received little attention. Given the extensive theorical and empirical literature arguing in favour of its great strength as a heuristic (e.g., Arceneaux, 2008; Campbell et al., 1960; Dancey and Sheagley, 2013; Loepp and Redman, 2022; Schaffner and Streb, 2002; Zaller, 1992), it is a natural subsequent step to test how the heuristic mechanism would hold when accounting for partisanship.

A similar comment arises from this dissertation over how theories are operationalized in quantitative analyses. Quantitative social science works under the positivist assumption that all theories can be tested empirically (Lane, 1996; Popper, 1959). While this dissertation does not deviate from this assumption, it again provides an important caveat to it. The way theories are operationalized should be flexible enough to account for important contextual differences that may drive empirical results. Again, quantitative analyses are often torn between the importance of consistency across studies to maximize comparability of results and that of flexibility to ensure that important contextual differences are accounted for and do not unduly influence results (King et al., 1994). Often, when operationalizing their theories, scholars err on the side of parsimony to enhance comparability (Hall, 2003). Yet, it is critical that we find the appropriate level of

abstraction to ensure that consistency across case studies is not obtained at the detriment of theoretical precision (Sartori, 1970). This is an important trade-off to keep in mind and through this dissertation, I developed the argument that the affective polarization literature has leaned too much on the side of consistency, by recycling methodological approaches developed to fit the American context that do not apply in multiparty systems. In contrast to how it operates in the United States, it appears that affective polarization in multiparty contexts does not revolve only around partisanship and can also accommodate multiple poles of polarization. Through such findings, my dissertation not only joins other studies that have called for a novel operationalization of affective polarization in multiparty systems (Bantel, 2023; Gidron et al., 2023; Reiljan and Ryan, 2021) but even goes further by suggesting that we should also use a new level of analysis, studying it at both the macro and micro-level.

In essence, my dissertation underscores how much remains to be uncovered regarding affective polarization. The topic has been studied under some very specific assumptions, with little flexibility across cases and this potentially inhibits our understanding of the phenomenon. Taking a different approach which de-emphasizes the legacy of the American roots of the topic is largely needed to bolster our understanding of a phenomenon that is now undoubtedly present across – at least – the Western World.

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