LESSONS IN RESILIENCE

Canada's Digital Media Ecosystem
and the 2019 Election

DIGITAL DEMOCRACY PROJECT

PUBLIC POLICY FORUM
FORUM DES POLITIQUES PUBLIQUES

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DIGITAL DEMOCRACY PROJECT

The Digital Democracy Project is a joint initiative led by the Ottawa-based Public Policy Forum and the Max Bell School of Public Policy at McGill University.

The project studied the media ecosystem in the run-up to and during Canada's October 2019 federal election by monitoring digital and social media and by conducting both regular national surveys and a study of a metered sample of online consumption. The project communicated its preliminary research findings publicly on a regular basis from August to October 2019.

The project director is Taylor Owen, Associate Professor and Beaverbrook Chair in Media, Ethics and Communications in the Max Bell School of Public Policy at McGill University. The online data analysis team was led by Derek Ruths, Associate Professor in the School of Computer Science at McGill University, and the survey analysis team was led by Peter Loewen, Professor of Political Science at the University of Toronto.

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EXECUTIVE SUMMARY

Researchers, policy-makers and the public at large are paying more attention to the threats that disinformation and other forms of online media manipulation pose to democratic institutions and political life. Starting with the Brexit referendum and United States election in 2016, and building through the European Parliament elections in 2019, concerns about co-ordinated disinformation campaigns organized by state or other actors, automated social media accounts ("bots"), malicious and deceptive advertising, and polarization enhanced by algorithmic "filter bubbles" have reached an all-time high.

The Digital Democracy Project (DDP) was set up to help build the international evidence base on the impact of these trends with a robust Canadian case study whose methods could be applied in other locations. The project consists of three phases. The first was a two-day workshop for journalists about disinformation threats, held in May 2019 in Toronto. The second, and the focus of this report, was researching and monitoring the digital media ecosystem in real time ahead of the Canadian federal election on Oct. 21, 2019. The third and final phase, beginning in early 2020, will involve further research and consultations with experts and public representatives to develop policy recommendations.

We launched this phase of the project in August 2019 and continued collecting data until the end of November. This work builds on the growing field of study of election integrity and, in particular, on the study of the spread and influence of media exposure (both online and offline) and of disinformation and toxic content on the behaviour of voters. Using a novel approach that combined online data analysis with a battery of representative national surveys, we sought to contextualize and better understand developing patterns of online activity with measures of media consumption, trust and partisanship.

Overall, our findings suggest the Canadian political information ecosystem is likely more resilient than that of other countries, in particular the U.S., due to a populace with relatively high trust in the traditional news media, relatively homogenous media preferences with only a marginal role for hyperpartisan news, high levels of political interest and knowledge, and — despite online fragmentation — fairly low levels of ideological polarization overall. While we do find affective polarization, which involves how individuals feel about other parties and their supporters, we find less polarization on issues, which has been a key point of vulnerability in other international elections.

Despite some worries about automated activity being used to game trending hashtags on Twitter or the presence of a few disreputable online outlets, our research suggests their impact was limited. While there remain significant blind spots in the online ecosystem caused by limited data access for researchers, based on the communication we could see, we did not find evidence of any impact attributable to a co-ordinated disinformation campaign.

Looking forward, however, we find evidence to suggest potential future vulnerabilities, most of which are related to growing partisanship and polarization, as well as the segmentation of the populace into online information environments that reinforce existing world views.

Main findings

Media Consumption: There is broad concern about hyperpartisan news outlets, drawing from the U.S. experience of the important role played by far-right news outlets influencing the media agenda in the 2016 election.[1] By contrast, we find that news sources catering to specific partisan audiences play a very small role in Canada, with only 10% of survey respondents reporting they consume news from such sources. In fact, media preferences are relatively homogenous across party lines, with most Canadians consuming information from reputable and recognized mainstream outlets such as the CBC, CTV and Global News. This generally holds true for sharing patterns on social media as well, although sharing and consumption of partisan-congenial outlets is somewhat higher online. It's worth noting that television remains the dominant mode of consuming the news for Canadians — an often under-examined space in the era of social media.

Media Trust and Literacy: Generally, Canadians have a fair amount of trust in the news media. We find Canadians trust the top

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1   Faris, R.M., et al. 2017. Partisanship, Propaganda, and Disinformation: Online Media and the 2016 U.S. Presidential Election. Berkman Klein Center for Internet & Society.

media outlets at similar levels as they trust friends and family, in line with comparative studies that have consistently measured Canadian trust in media as among the highest in the world.[2] In certain ways, Canadians appear to demonstrate important elements of media literacy, rating hyperpartisan or disreputable news outlets very poorly and self-reporting high levels of skepticism in stories that they see on social media.

Political Knowledge: Canadians are highly interested in and reasonably knowledgeable about politics. While concerns about the corrupting effects of online political discourse have become a popular critique, our findings suggest that even after controlling for a range of socio-economic factors (age, gender, region, language and employment status), those who participate in online conversations are more interested in politics, more knowledgeable, and tend to feel more personally capable of effecting political change. We also find that people with high news exposure, somewhat surprisingly, are not only more likely to be more informed about public policy than those who don't follow the news, but also more misinformed.

This does not mean journalists deliberately misinform people; rather, people with strong political beliefs may selectively engage with the information provided by the media such that they draw incorrect conclusions to support their existing views. This suggests that political news as currently delivered to Canadians might not be an antidote to misinformation.

Fact-Checking: We find a huge appetite for fact-checking among the general public, with almost three-quarters of our representative sample of Canadians wanting to see more fact-checking in journalism. Reassuringly, this desire for fact-checking is linked to trust in media, suggesting it is motivated positively by a desire for better journalism and a more informed public, rather than negatively by a low-trust "fake news" discourse where journalists are suspect and thus need to be constantly fact-checked. While the fact-checking infrastructure set up for the Canadian election was fragmented across various news outlets and never had the type of co-ordination and collaboration that has been deployed in other contexts, our findings leave us hopeful about the ability of fact-checking to correct misperceptions. There are important limits to fact-checking, however. It is easier to improve the factual knowledge of those who are simply uninformed than those who are misinformed, as the latter are less likely to reverse a persistently held falsehood after receiving a fact-check. As well, we did not find significant evidence that fact-checks on their own have meaningful downstream effects on entrenched policy attitudes. For example, fact-checks on climate change appear to have little effect on Canadians' position on carbon taxes.

2   Newman, N., et al. 2019. Reuters Institute Digital News Report 2019. Reuters Institute for the Study of Journalism.

Polarization: We looked at various measures of polarization in Canada. We find that Canadians generally tend to be ideologically moderate rather than clustering on opposite sides of an ideological spectrum. However, we find the beginnings of a potentially concerning trend of affective polarization, where committed partisans have substantially more negative feelings toward members of ideologically opposed parties. Interestingly, we found little evidence that the tense 2019 Canadian election influenced levels of affective polarization, which remained relatively stable throughout the campaign. Nor did we find evidence that social media use exacerbates affective polarization, which seems to be driven by ideology, partisanship and perceptions of party extremity.

Echo Chambers: Our tracking of online news consumption and our survey experiments together suggest Canadians are substantially less likely to pick partisan news sources and stories than one might expect. However, while Canadians are not generally drawn to partisan-congenial news sources, Twitter users do engage with partisan-congenial content from various sources, in line with previous research that emphasizes homophily in Twitter networks. Canadians are quite selective in the content they share and the people they follow on Twitter, with many committed partisan accounts that only follow and share content from their preferred party. This is a potentially worrying trend in the nature of our online political discourse.

Toxic Speech: A major concern leading into this election, as well as about the online discourse more broadly, is that the ability to post anonymously on platforms such as Twitter and Reddit may lead users to feel more comfortable posting hateful language directed at political candidates or other users. The proportion of tweets containing hateful language remained low (less than 2%) even in negative hashtags. We found hate terms were more likely to appear in tweets that express negative sentiments. Left-leaning Twitter users were more likely to use classist terms such as "hillbilly," while right-leaning users most often used gendered and sexualized slurs.

Inauthentic Activity: Significant media attention has been devoted to the possibility that political actors are using co-ordinated social media accounts to try to influence online discourse. Because of the proven unreliability of bot-detection tools, establishing the level of such inauthentic activity is virtually impossible. However, if bot-detection methods are applied to our data, we find the vast majority of accounts engaging in Canadian political discourse that have not been taken down by Twitter are not flagged as inauthentic. We further investigated claims of foreign influence by accounts that include Make America Great Again (MAGA) in their profiles. Despite a higher proportion of likely automated accounts among MAGA users than the overall pool of users we tested, neither automated nor manual analysis uncovered evidence of co-ordinated behaviour that we would label election manipulation or interference.

Scandals: We examined two major stories that broke during the 2019 election: the emergence of photos of a pre-politics Justin Trudeau in blackface and the revelation that Andrew Scheer was not an insurance broker as he claimed. Examining online behaviour around these two stories provides insight into the online ecosystem; when a scandal emerges as suddenly as these ones did, it allows us to observe how social media behaviour changes in response. In both cases, we find that the peak of activity surrounding

the revelations occurred for approximately 48 hours, with declining attention followed by very little broad-based interest five to seven days after the story first broke. We find that interest from journalists and candidates declined at a similar pace as the general public, and that Facebook and Twitter users have similar interest and decay patterns. We also find that attention to these stories was largely isolated to specific partisan-motivated communities, with different partisan groups reacting very differently to the two stories and showing a strong propensity to favour discussion of opposing parties' scandals. This is a recurring theme in the broader report, with individuals being motivated to consume and share content that supports their preferred candidate, leader or party.

Disinformation: Finally, throughout the election, we looked actively for disinformation — false information related to political issues disseminated with the intent to mislead the Canadian public, disrupt public democratic dialogue and potentially affect the outcome of the vote. Our finding is that disinforma-

tion did not play a major role in the 2019 Canadian election campaign. This is consistent with the findings of many other investigations by journalists, academics, government agencies and officials, and the private sector. That is not to say there were no instances of disinformation, but what there was generally did not appear co-ordinated and had limited impact.

While it is impossible to prove the counterfactual, Canada had a number of factors working in its favour leading into the election. Coming after a number of international elections where disinformation was a serious problem, we were able to learn from the tactics of both those seeking to undermine election integrity and those trying to protect it. This allowed the government, researchers, journalists and civil society to mobilize. As we show in the report, despite some worrying trends, Canada also has a strong baseline that likely inoculated us from some of the harms seen in other jurisdictions. Overall, this is a good news — rather than a fake news — story.
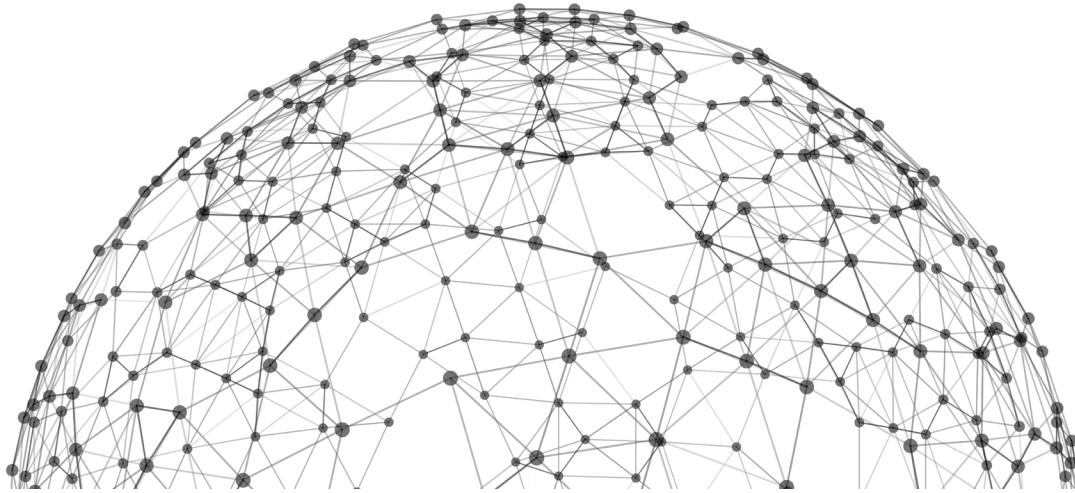
1. BACKGROUND

The Digital Democracy Project (DDP) is a multi-year project to analyze and respond to disinformation and hate in the digital public sphere. It will use research on the Canadian digital information ecosystem as the basis for developing public policy responses to counter these threats to democratic institutions and social cohesion.

The threats that disinformation (defined by the European Commission as "verifiably false or misleading information that is created, presented and disseminated for economic gain or to intentionally deceive the public, and may cause public harm"[1]) poses to democracy have been widely discussed. From elections in the United States in 2016 and France in 2017, to organized influence campaigns by state actors to promote their own interests at the expense of foreign adversaries[2] or domestic protest movements,[3] we have repeatedly seen how digital communication can be used to interfere with citizens' ability to have a say in how they are governed.

The DDP was designed to help build the international evidence base with a robust and maximally reproducible Canadian case study. Although many studies have sought to calculate the prevalence of various forms of problematic content online, these are rarely grounded in the context of the media consumption of a country's populace, and thus provide limited insights into real consequences of digital content for opinion formation and voting behaviours. Our approach sought to combine survey, social media and behavioural data in order to contextualize our findings.

The DDP consists of three phases. The first was a two-day workshop for journalists about disinformation threats, held in May 2019 in Toronto. The second, and the focus of this report, was researching the digital media ecosystem in real time in the lead-up to the Canadian federal election on Oct. 21, 2019. The third and final phase, beginning in early 2020, will involve further research and consultations with experts and public representatives to develop policy recommendations.

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1   European Commission. April 26, 2018. Tackling Online Disinformation: A European Approach.
2   See for example, Hanlon, B. Nov. 13, 2018. Iran's Newest Info Op Shows an Evolution of Tactics. Alliance for Securing Democracy.
3   See for example, Myers, S.L., and Mozur, P. Aug. 13, 2019. China Is Waging a Disinformation War Against Hong Kong Protesters. The New York Times.

Project methodology

The DDP's election monitoring project began on Aug. 1, 2019, and concluded on Nov. 30, 2019, extending for several weeks before and after the Oct. 21 election to establish a baseline. The project used data from both public opinion polling and online media analysis to examine the media habits of the broader Canadian public as well as the political and journalistic class, with an eye to understanding the various relationships between media use, partisanship, political knowledge, and concern over policy issues.

The project's research findings were based on several streams of data:

Social media monitoring

The DDP engaged in widespread social media monitoring focused on Twitter, Facebook, Reddit and Instagram. Some data collection was also done on YouTube, Tumblr, 4Chan and other sites but the data is not used here. Each of the collection strategies is described below.

Twitter

Twitter data used in this report was collected from Aug. 1 to Nov. 30, 2019. The objective of the Twitter data collection was to capture all major party candidates, major news organizations, as many Canadian political journalists as possible, and a broad swath of the public conversation. Journalists and media organizations were identified using an iterative approach that began with a core seed list of all members of Parliament, the Twitter handles of all declared candidates, and approximately 300 journalists, academics and news outlets

validated by a Canadian political media expert. Additional accounts were added throughout the election based on frequency of posting on Canadian election-related themes and mentions to and from existing tracked accounts. This algorithm yielded approximately 5,000 likely accounts of interest, each of which was reviewed manually for Canadian politics relevance and then tracked. This yielded a total of 3,889 explicitly tracked accounts, of which 830 were journalists, 272 were official accounts of news outlets, 1,280 were candidates of major parties, and 1,507 were third parties (a broad category including provincial politicians of note, registered third-party advocacy groups, academics, and public users with many followers).

To supplement this elite-oriented collection effort, we gathered a list of Canadian politics hashtags. We used a similarly iterative strategy and began with a list of 33 well-known seed hashtags. This list was expanded based on hashtag co-occurrence and frequency of use by our existing tracked users on a weekly basis throughout the entire campaign. We identified 1,854 hashtags in this manner, and then manually reviewed them to identify their relevance. This yielded a list of 544 Canadian politics hashtags. A full list of accounts and hashtags tracked is available upon request.

Facebook and Instagram

Facebook and Instagram data was sourced from CrowdTangle, a social media analytics tool owned by Facebook. CrowdTangle tracks public posts on Facebook, Instagram and Reddit, made by public accounts or groups. The tool does not track every public account and does not track private profiles or groups, so this data is not representative of performance across the entire platform. The numbers shown here reflect public interactions (likes, reactions, comments, shares, upvotes and three-second views), but do not include reach or referral traffic. The data does not include paid ads unless those ads began as organic, non-paid posts that were subsequently "boosted" using Facebook's advertising tools. Because the system doesn't distinguish this type of paid content, note that some high-performing content may have had paid distribution. CrowdTangle also does not track posts made visible only to specific groups of followers.

Throughout the election, we iteratively added Facebook and Instagram pages, groups and accounts to follow based on keyword and manual searches by a paid research assistant. In total, we collected detailed information on 1,575 Canadian politics pages and groups on Facebook and 719 accounts on Instagram. We scanned these at regular intervals to track the growth of posts and associated reactions. As an additional supplement to this data, we searched for particular links using CrowdTangle and added these posts to our dataset. An

additional set of groups was collected in the post-election period to ensure the Facebook and Instagram collections were as comprehensive as possible.

Reddit

We collected data from a range of Canadian politics subreddits. We developed a list at the beginning of the election and routinely checked other publicly available subreddits, yielding a final list of 181 subreddits. While not comprehensive, all major Canadian politics subreddits were captured. We used the Reddit API (application programming interface, a type of data collection tool) to collect information on Reddit submissions and collected a total of 120,800 posts from Aug. 1 to Nov. 30.

Digital news media

We collected the text from a range of digital media related to Canadian politics. We started with a set of 65 digital news sources and collected all published material using RSS (Really Simple Syndication) feeds. For any of the identified sources, we also collected the data from every link to those domains from either Facebook or Twitter, yielding a corpus of approximately 573,000 articles from Aug. 1 to Nov. 30.

Survey and metered data

We collected survey data over nine waves from 14,554 Canadian citizens 18 years and older using the sample provider Qualtrics:[4]

- Wave 1: July 24 to Aug. 7
- Wave 2: Aug. 17 to 23
- Wave 3: Aug. 28 to Sept. 5
- Wave 4: Sept. 11 to 16
- Wave 5: Sept. 19 to 24
- Wave 6: Sept. 27 to Oct. 3
- Wave 7: Oct. 4 to 13
- Wave 8: Oct. 14 to 20
- Wave 9: Oct. 24 to Nov. 4

Quotas were set for sample collection so that each wave was nationally representative by region, gender, language and age according to the 2016 Canadian census. Data was weighted within each region of Canada by age and gender, as well. We used an iterative proportional fitting algorithm for our weighting procedure with a minimum weight of 0.25 (N=21) and a maximum weight of 2.98 (N=1).

Survey respondents were asked questions related to basic demographics, as well as their partisan, ideological and issue preferences. They were also asked to report their exposure to the news media in the previous week. Occasionally they were exposed to randomized

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4   The sample provider Dynata was used to collect data for Wave 2.

experiments, the nature of which varied wave to wave. The median completion time was 25 minutes. The survey instruments are available upon request. We present 90% confidence intervals with our figures.

We supplemented our survey data with an unrepresentative sample of 754 respondents provided by Qualtrics whose online activity we tracked for four weeks through the campaign period (Sept. 19 to Oct. 20). This allowed us to observe online news consumption for this set of respondents.

Social media survey

A final survey was administered to a Facebook and Twitter sample from Oct. 4 to 20. A total of 2,773 respondents were surveyed, 1,614 from Facebook and 1,159 from Twitter. Participants were recruited using targeted advertisements to those who consume Canadian political news (Facebook) or follow Canadian politics hashtags (Twitter). An incentive was provided for participation. Survey respondents were asked questions related to basic demographics, as well as their partisan, ideological and issue preferences, and were exposed to randomized experiments. The median completion time was 15 minutes. The survey instruments are available upon request. We present 90% confidence intervals with our figures.

The Canadian election

Canada is a parliamentary democracy, meaning citizens vote for local representatives (members of Parliament) and the party with the most members elected forms government, with the party leader becoming prime minister. The 2019 federal election saw the incumbent Liberal Party of Canada, helmed by Prime Minister Justin Trudeau, challenged by five major parties: the official Opposition Conservative Party of Canada, the leftist New Democratic Party of Canada, the Green Party of Canada, the Bloc Québécois, which advocates for the province of Quebec's interests, and the newly formed populist People's Party of Canada.

The Liberals were elected with a decisive majority in 2015, but they headed into the 2019 election campaign on the heels of several political scandals and controversies. Pre-election polling projected a tight race between the Liberals and the Conservatives, which held true throughout the election campaign. In the end, the Liberals were re-elected with a minority government. They were elected to 157 seats, with 121 for the Conservatives, 32 for the Bloc Québécois, 24 for the NDP, 3 for the Greens and 0 for the People's Party.

Ahead of the election, the Liberal government introduced the Elections Modernization Act to address some of the challenges that arose from campaigning in a digital environment, including the threat of foreign interference. Among the new measures introduced by the Act:

- Social media companies were required to create a registry of all digital advertisements placed by political parties or third parties before and during the election campaign and ensure they remain visible to the public for two years.
- Digital platforms were banned from selling election advertisements to foreign entities.

- Tougher restrictions were put in place for third-party groups engaging in partisan activities during an election period, including limits on advertising spending and a ban on taking funding from foreign entities.

- Impersonating a politician or Elections Canada was made illegal.

Separate from the Act, a new "critical election incident public protocol" group of five top-level bureaucrats was also established to alert the public if they became aware of interference during the campaign period.

Several political issues were expected to play a role in the election campaign:

- The SNC-Lavalin affair: SNC-Lavalin, a major engineering firm based in Quebec, was charged with fraud and corruption related to payments made to officials in the Libyan government of Moammar Gadhafi. Then-attorney general Jody Wilson-Raybould alleged that in 2018, several senior government officials, senior advisers to Trudeau and the prime minister himself had urged her to instead secure a deferred prosecution agreement for SNC-Lavalin, which would allow the firm to avoid criminal prosecution. In a report released in August 2019 — less than one month before the election campaign began — Canada's ethics commissioner found that Trudeau violated the Conflict of Interest Act by trying to influence Wilson-Raybould.[5]

- Populism: The 2019 election was the first to include the People's Party of Canada, which was founded in September 2018 by former Conservative MP Maxime Bernier. The party took a populist stance, campaigning to halve immigration numbers, repeal the Multiculturalism Act and abolish the carbon tax.[6] With another populist leader, Doug Ford of the Progressive Conservatives, winning the Ontario provincial election in 2018, there was speculation that 2019 could bring about a populist surge across Canada. The issue was thrown into sharper relief with NDP Leader Jagmeet Singh, a turban-wearing Sikh and a child of immigrants, being the first non-white leader of a major Canadian political party.

- Climate change: Like other countries, Canada has been struggling to develop policies that will lower the country's greenhouse gas emissions without harming its economy. Complicating matters is the fact that the resource extraction industries make up a significant portion of the country's GDP. There are also regional sensitivities involved, with oil and gas being a major economic driver and employer in Alberta and Saskatchewan — the traditional heartland of the Conservative party.

- Third parties: The 2018 Ontario election was notable for the way that a third-party group, Ontario Proud, disrupted the political information landscape with social media ads and posts taking aim at the incumbent Liberal government, which ended up losing to Ford's Progressive Conservatives. With Ontario Proud's founder launching a national organization, Canada Proud, ahead of the federal election, analysts were closely watching partisan third-party groups.[7]

5   Tasker, J.P. Aug. 14, 2019. 'I take responsibility,' Trudeau says in wake of damning report on SNC-Lavalin ethics violation. CBC News.
6   Quan, D. Oct. 22, 2019. Nothing but a 'vanity project': People's Party of Canada is likely dead, experts say. National Post.
7   Walsh, M. April 25, 2019. Ontario Proud launches Canada Proud with aim of taking down Trudeau. iPolitics.

2. CANADIAN POLITICAL AND MEDIA ECOSYSTEM

2.1 Media consumption

It is easy for Canadians to look at the news media environment in the United States and assume the fragmented and low-trust media ecosystem extends across the border. However, a recent study from the Reuters Institute for the Study of Journalism ranked Canada fifth out of 38 countries in terms of media trust, while the U.S. ranked 32nd.[1] We, too, find far less reason for concern in Canada. Generally speaking, Canadians trust the top media outlets at similar levels as they do friends and family, and far more than they trust the information they get from social media or political parties. Right-leaning partisans can be expected to trust the media less than left-leaning partisans, but the difference is modest.

Canadians on the whole have broadly centrist and mainstream news media diets. Few Canadians are attuned to ideologically skewed media sources, even among partisans whose views align with these sources.

News media consumption

Which news organizations did Canadians use to learn about the issues they cared about in the election? We asked survey respondents whether they had read, watched or listened to political news on a number of television, radio, print and online news outlets over the past week. Overall, television remains the dominant mode of consuming the news. Fifty-seven percent of respondents reported watching news about politics on television over the past week, compared to 46% who read print-based outlets, 37% who listened on the radio, and 35% who were exposed to the news from social media.

We asked respondents to report the outlets they encountered over the past week when consuming political news. Canadians broadly receive their political news from traditional, mainstream outlets, the top five being TVA Nouvelles (Quebec only; 54%), CBC TV (42%), CTV TV (40%), CBC online (36%) and CTV Online (39%). Although many people are concerned about the tendency of individuals to limit themselves to news sources with similar viewpoints, the general public does not readily consume political content from partisan-congenial alternative sources such as Rebel News (11%), the Post-Millennial (10%) and Rabble.ca (9%). The full ranking of reported media consumption over the past week is shown in **Figure 2.1.1.**

Media preferences are relatively similar regardless of which party respondents supported. The top five print/online news sources for Conservative supporters are TVA Nouvelles (58%), CTV (48%), Global (43%), CBC (43%) and CTV Online (39%), while Liberals report highest levels of news consumption from TVA Nouvelles (55%), CBC (49%), CTV (47%), CBC
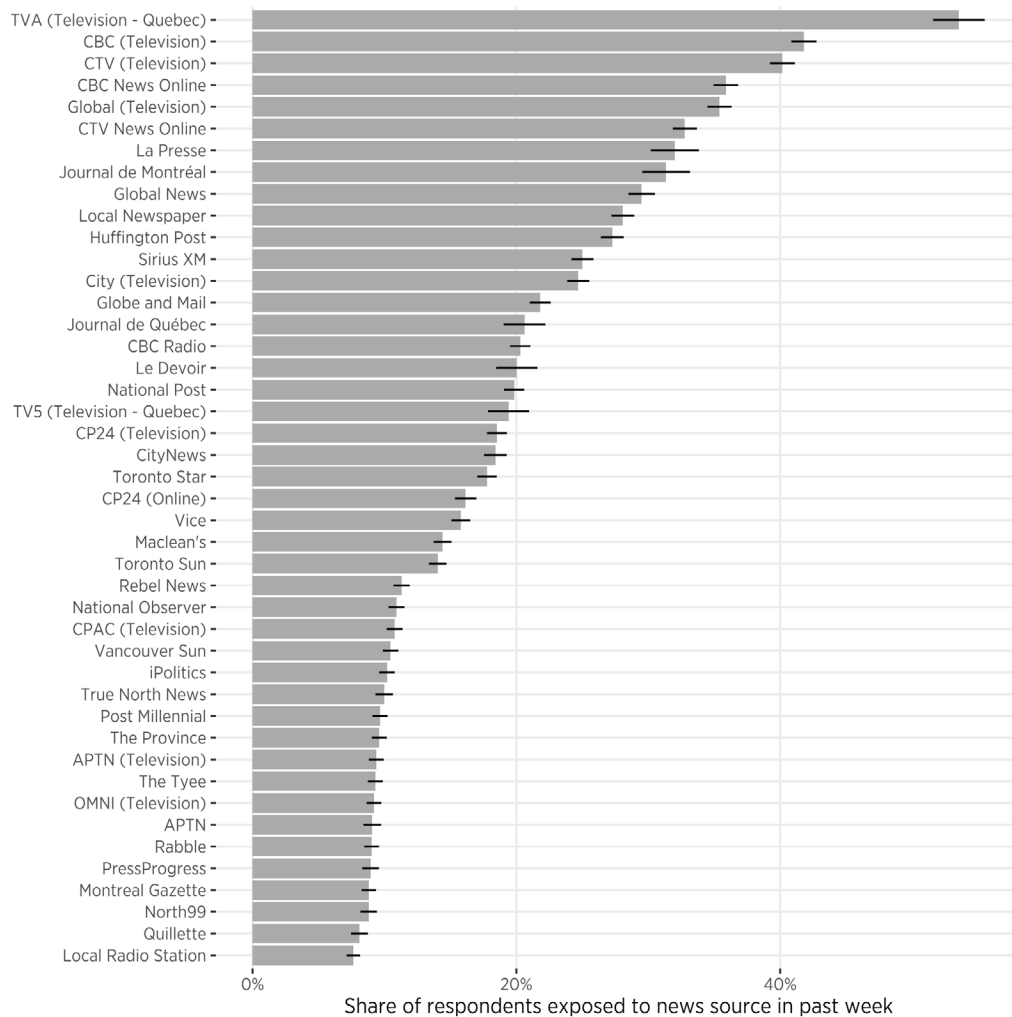

Figure 2.1.1. Percent of respondents reporting exposure to news outlet in the past week.

Online (43%) and Global (41%). Full results for the three major national parties are shown in **Figure 2.1.2.**

Right-wing alternative media sites such as Rebel News (17%) and The Post Millennial (12%) receive only modest readership among Conservative party supporters, while the same is true of left-wing sites such as Rabble.ca among supporters of the Liberals (13%) and NDP (9%).

And what of social media? Facebook is used the most by respondents for political news in the past week (30%), followed by YouTube (20%). Twitter, in contrast, trails further behind (16%). Tumblr (6%) and WhatsApp (8%) anchor the bottom of the list. This draws our attention to the fact that Twitter, and social media generally speaking, are not used by the vast majority of the public for their news about politics and public affairs.
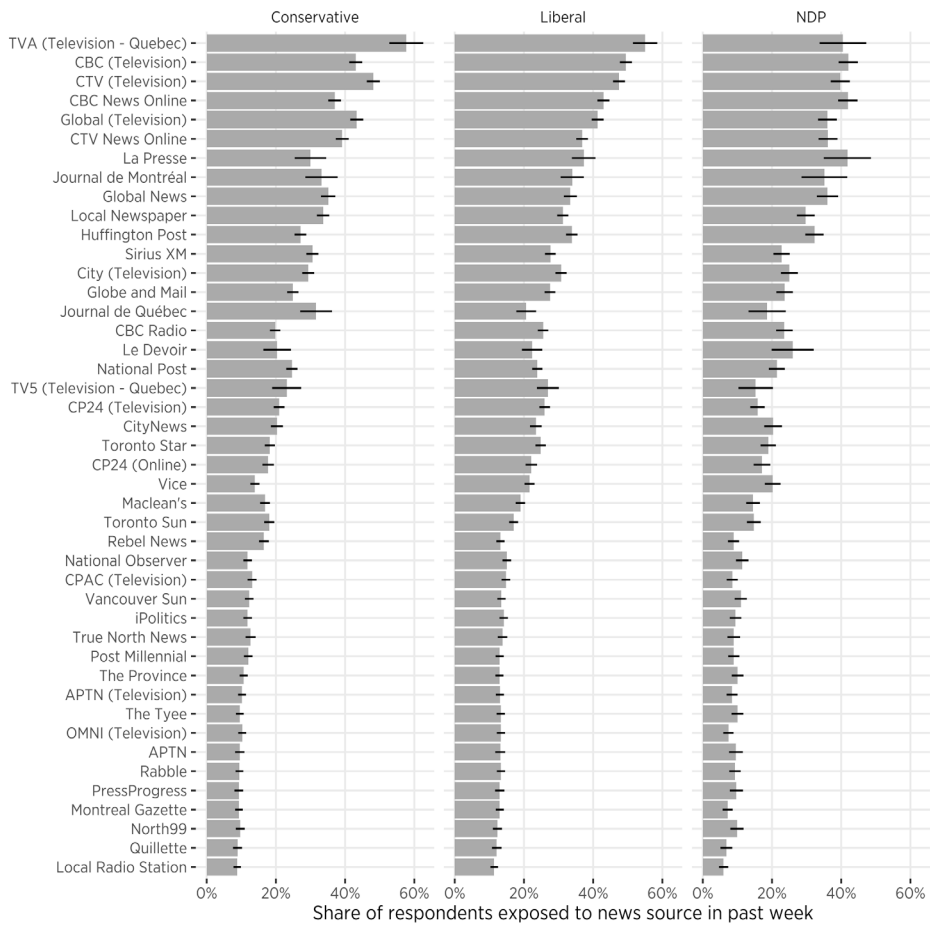
Figure 2.1.2. Percent of respondents reporting exposure to news outlet in the past week by partisan group.
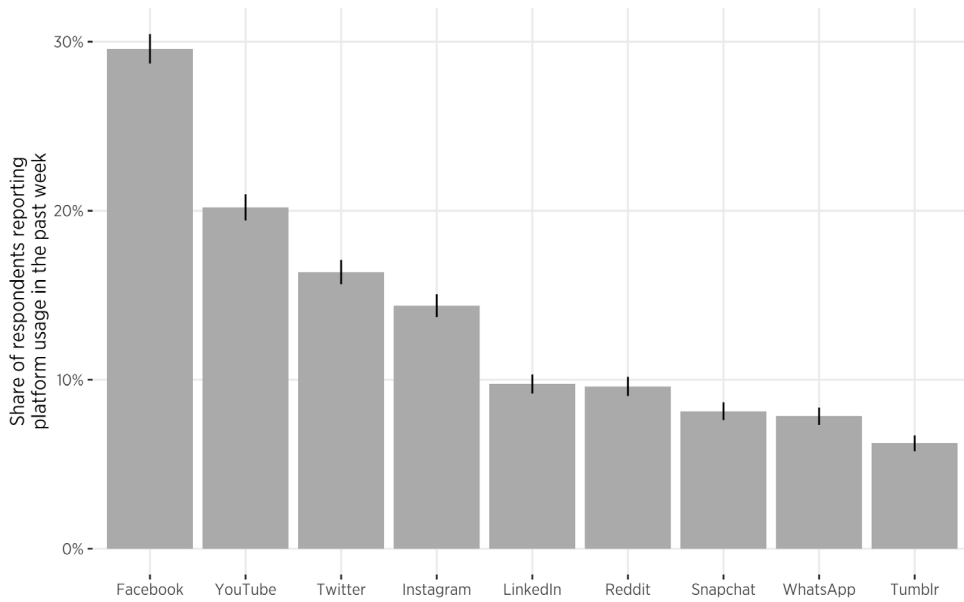

Figure 2.1.3. Percent of respondents reporting social media usage in the past week.

One limitation of the above analysis is that self-reported exposure to news outlets is likely to be fraught with error. People will only vaguely recall when they visited certain websites, or whether they did so at all. There is also a tendency to over-report exposure to news outlets. To overcome this issue, we conducted a first-of-its-kind study in Canada where we tracked the online news consumption of a sample of more than 750 Canadians for a period of four weeks. We are able to see each and every link these respondents clicked on, including the news websites we tracked in our survey. **Figure 2.1.4** plots the share of respondents visiting each of the websites over the tracking period.
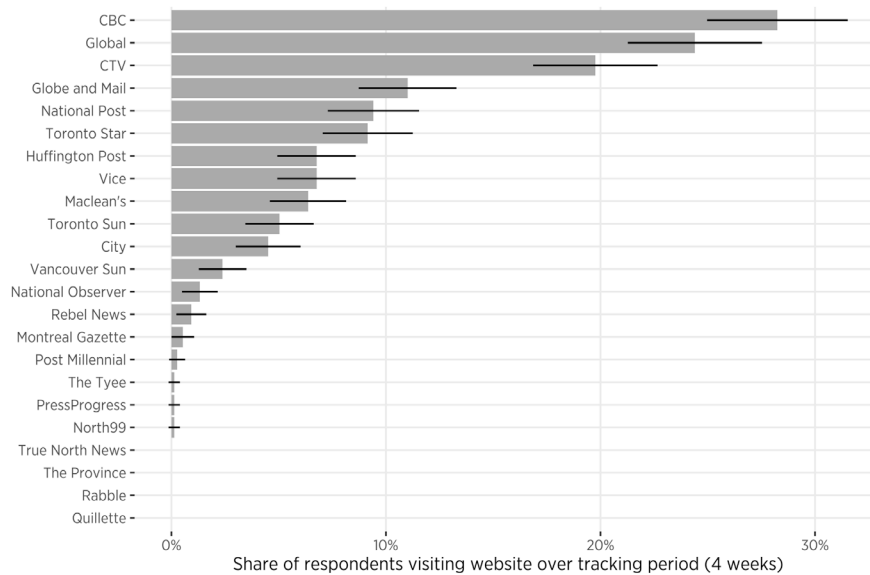

Figure 2.1.4. Percent of respondents visiting news website in four-week tracking period.

A few key patterns emerged. First, the partisan-congenial sources remain at the bottom of the list for our tracked respondents. Rebel News was visited by 1% of our tracked respondents, The Post Millennial by 0.26%, and Quillette by no one at all. Second, the plot below is arranged by outlet exposure as indicated by self-reported survey responses. This shows us that even though our self-reported exposure questions don't allow us to get a clear picture of our respondents' exposure to news outlets, they do a fair job in telling us which outlets are more widely used than others. Overall, these results reinforce our finding that Canadians have a broadly centrist and mainstream media diet.

This trend holds when it comes to Canadians' interactions with news organizations on social media. **Figure 2.1.5** shows the top media organizations shared on Twitter and Facebook during the election. Across both Facebook and Twitter, CBC content was the most widely shared, followed by links to Global News, Sun News, the Globe and Mail and the Toronto Star. CTV and the National Post round out the top seven outlets shared. The content shared online is somewhat more polarized as compared to the data from the metered study (e.g. Post Millennial content is shared widely on both Facebook and Twitter but not frequently
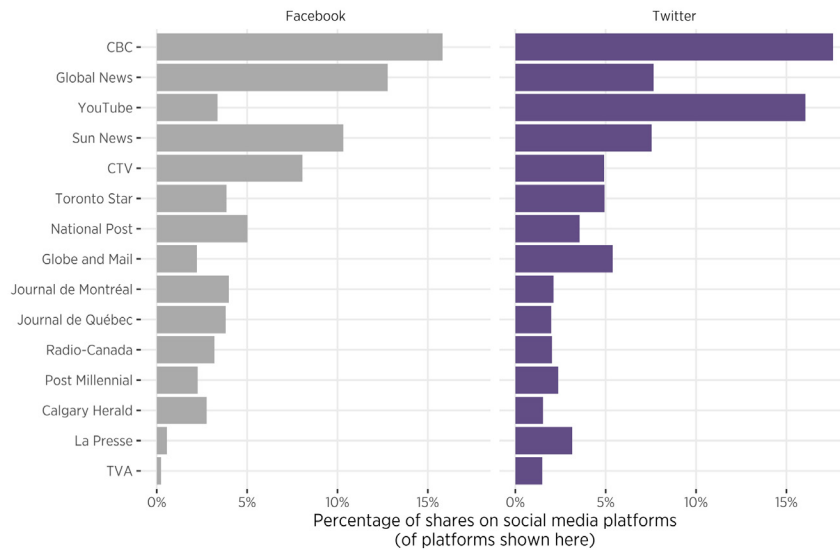
Figure 2.1.5: Shares of top 15 media outlets on Twitter (left) and Facebook (right)

visited by the tracked respondents). In our discussions of polarization and echo chambers in Chapters 2.4 and 2.5, we evaluate explanations for why some outlets, particularly those that are more ideological, are disproportionately shared online.

Finding: Canadians on the whole have broadly centrist and mainstream news media diets. Most Canadians get their news from television and are reliant on the major networks (CBC, CTV and Global). Few Canadians are attuned to partisan-congenial news sources, even among partisans who are supposed to favour these sources.

Do Canadians trust the news media?

One potential vulnerability for the Canadian media environment could be low levels of trust in the news media divided along partisan lines. This creates a market for alternative sources of news that may cater to partisan audiences and adhere less strongly to traditional journal-istic norms.

We asked respondents how much they trust various news organizations and other information sources — social media, political parties, friends and family — to provide objective and factual information about the election, using a 0 to 10 scale where 10 is complete trust and 0 is complete distrust. The results are shown below in **Figure 2.1.6** for all respondents and broken down by partisans of the three major parties.

CTV was the most trustworthy organization in our list (6.1 on the 0 to 10 scale), followed by La Presse among Quebec respondents (6.0), CBC (5.9), Global (5.9), and the Globe and Mail (5.9). Major TV networks (CBC, CTV, Global) and newspapers (Globe and Mail, National Post, Toronto Star) together average 5.6, which rivals the trust our respondents have in political information from their friends and family (5.9). Most organizations hover between 5 and 6 on the scale. Only the Toronto Sun (4.9), PressProgress (4.4) and Rebel News (4.1) fall below

the midpoint of 5 and have trust levels that approximate the average trust score for political parties (4.7). Our respondents also claim to be deeply skeptical of political information provided on social media (3.2).
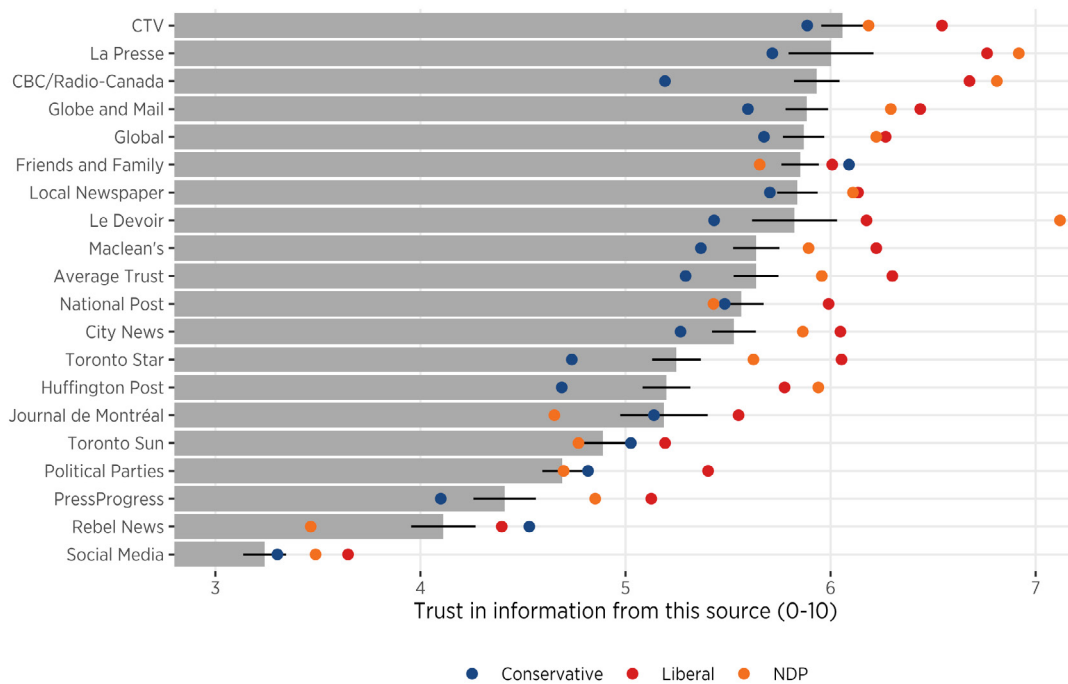

Figure 2.1.6. Average trust in information source (0 to 10 scale) by partisan group.

There are some modest partisan differences in trust levels. Broadly speaking, Conservative partisans exhibit less trust than the average Canadian in most news organizations, with a few exceptions, such as Rebel News and the Toronto Sun. The gap in trust evaluations is much wider for the CBC, the Toronto Star, the Huffington Post and PressProgress. However, it is worth noting that different partisan groups generally have similar rankings of outlet trust. For instance, Rebel News is the second least trustworthy outlet on this list for Conservative partisans, ahead of only PressProgress, a media outlet produced by the left-leaning Broadbent Institute; for Liberals, PressProgress is the second least trustworthy source, trailed by only Rebel News. Canadians in general are much more likely to place their trust and confidence in major news organizations than partisan-congenial media.

Finding: Overall, Canadians' trust in the news media to provide objective and accurate information modest. However, part of this is likely due to their reticence to trust anyone for this information. The top print and television outlets together have an average level of trust that approaches that of friends and family and far exceeds trust in information provided by political parties.

It is important to unpack Canadians' trust in news media organizations. We asked a series of questions in Wave 8 of our survey to delve deeper into these questions. First, we asked respondents how much trust and confidence they have in the mass media such as newspapers, TV and radio when it comes to reporting the news fully, accurately and fairly. The modal category was "a fair amount" of trust and confidence with 50% of respondents. Forty-one percent of respondents had little or no trust and confidence in the mass media, while a paltry 9% have a great deal of trust and confidence.

We also asked how accurate they believed news from media organizations to be. Again the modal category was a middling endorsement, with 57% of respondents believing news reports to be somewhat accurate. Thirty-six percent of respondents believed news reports to be not too accurate or not at all accurate, while a trivial 6% viewed these reports as very accurate.

Some of this skepticism in the trustworthiness and accuracy of the news media may be due to perceptions that the news media is biased. We asked respondents whether they believed news organizations deal fairly with all sides or tend to favour one side. Fifty-seven percent of respondents view media organizations as biased. As a follow-up question, we asked these respondents whether they believed the bias targeted Conservatives, Liberals or another group. Thirty percent of respondents believed there is a general bias against Conservatives in the news media, including 51% of Conservative partisans, 25% of non-partisans, and 22% of left-leaning partisans. In contrast, 14% believe there to be a pro-Conservative bias in the news media, while 13% specified some other form of bias. Respondents who indicated there was another form of bias at play tended to mention bias that varies by media organization or voiced the view that news organizations reflect corporate interests. Canadians are largely of the view that the news media is biased, but the direction of that bias is an open question.

Some Canadians also believe something more nefarious than the existence of media bias — that news media organizations will deliberately fabricate stories. We asked our respondents how often they believed Canada's major news organizations fabricate news stories. The most common category was "once in a while" (53%), and only 14% responded "never." A third of Canadians believe major news organizations fabricate news stories at least half of the time. This is a remarkably high number, though it is worth noting that it is lower than in the United States, where 42% of Americans believe major news organizations fabricate stories at least half the time.[2]

Finding: Canadians have lukewarm trust and confidence in the mass media. A sizable block of Canadians actively distrusts the news media, and very few exhibit high levels of trust and confidence. However, they may be more trusting of the news media than Americans, and they exhibit trust in the information provided by major news organizations at levels that approach their friends and family.

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2   Guess, A., et al. 2018. All media trust is local? Findings from the 2018 Poynter Media Trust Survey.

What drives trust in the news media?

Different factors may drive people to have different assessments of the trustworthiness of major news media organizations. We created a measure of media trust by rescaling the previous four questions and creating an index that ranges from 0 to 100, where 100 represents respondents who have maximum levels of trust in the news media. On average Canadians score a lukewarm 54 on this scale.

One obvious source of distrust in the media is partisanship. In the United States, trust in the news media is polarized along partisan lines — Republican supporters are much less confident in the news media, while the gap between Republicans and Democrats has grown over time on this question.[3]

We plot the distribution of media trust for right- and left-leaning partisans in Canada in **Figure 2.1.7.** There is indeed a partisan gap in media trust, with Conservative partisans less trusting of the news media (50) compared to partisans of the left-leaning parties (58). However, as is obvious from the plot, there is substantial overlap between the two groups. There is more to the story here than partisanship.
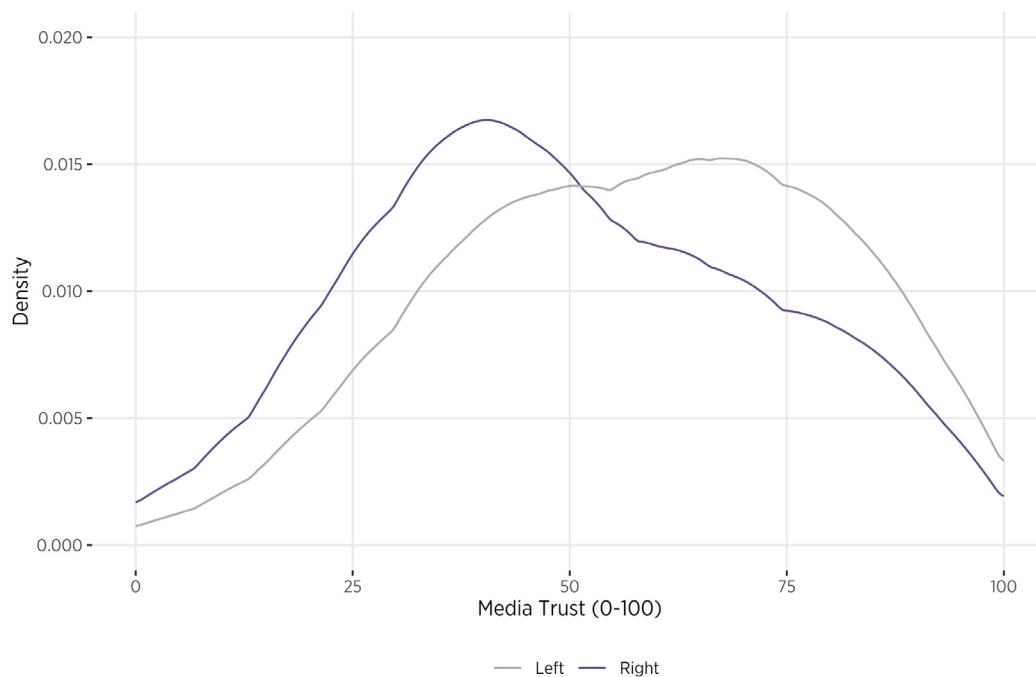

Figure 2.1.7: Distribution of media trust (0-100) by left and right partisanship[4]

3   Brenan, M. Sept. 26, 2019. Americans' Trust in Mass Media Edges Down to 41%. Gallup.
4   Note: index composed of four questions: 1) In general, how much trust and confidence do you have in the mass media — such as newspapers, TV and radio — when it comes to reporting the news fully, accurately, and fairly? 2) How accurate, do you think, is the news posted online by news organizations? 3) In presenting the news dealing with political and social issues, do you think that news organizations deal fairly with all sides, or do they tend to favor one side? 4) Based on what you know, how often do you believe the nation's major news organizations fabricate news stories?

We used regression analysis to estimate a model for predicting levels of media trust among respondents. This allows us to predict the effect of one variable, such as partisanship, on trust in the media, holding other factors constant. In other words, how different do we expect media trust to differ between left- and right-partisans with identical levels of political interest, strength of partisanship, external efficacy and so on?

We included variables related to partisanship, strength of partisanship, ideology and ideological extremity, along with political interest and knowledge. In addition, we added our measures of political efficacy — people's feelings that they are able to take part in political life and that politicians and political institutions will represent their interests. We might expect people with a more negative view of the political system to be more skeptical of the news media. We also included measures of generalized trust in people, and particularized trust in friends and family, the former of which might be related to trust in the news media.[5]

We find that partisanship only has a modest influence on media trust. Right-leaning partisans are expected to have media trust 5 points lower than left-leaning partisans after controlling for other factors. Self-reported ideology, for its part, is not significantly related to media trust. There is a partisan divide in trust of the media in Canada, but it is quite modest.

> **" WE FIND THAT PARTISANSHIP ONLY HAS A MODEST INFLUENCE ON MEDIA TRUST"**

Much more important is generalized trust and external efficacy, or one's belief that politicians are responsive to their values and interests. Respondents who scored the highest in their generalized trust toward people are expected to have media trust measures 22 points higher than those with the lowest levels of trust. This is a massive effect. Similarly, those who are the most externally efficacious are expected to have media trust measures 35 points higher than those with the lowest amount of efficacy. Canadians may have middling levels of trust in the media, but this trust is less structured by partisanship and ideology than it is by faith in democratic institutions and trust in people. Full results can be found in Table 2.1 in Appendix A.

Finding: Although there is a partisan divide in the trust Canadians have in the media, it is a modest one. More important in predicting the trust Canadians have toward the media is their generalized trust in people and their external political efficacy — or their feelings that their political institutions are responsive to their interests.

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5   Model calculated using ordinary least squares regression. Respondents were asked how much they trust people: 1) they met for the first time; 2) of another religion; 3) of another nationality; 4) their family; 5) from their neighbourhood; 6) people they know personally (from trust completely to do not trust at all, on a four-point scale). An exploratory factor analysis was conducted, which found two prominent dimensions running through these questions. Questions 1, 2 and 3, loaded strongly together, and this is labelled generalized trust. Questions 4 and 6 loaded on a second dimension labelled as particularized trust. Question 5 loaded partially on each dimension.

2.2 Political involvement and knowledge

The quality of a democracy relies in part on how active and engaged its citizens are in the democratic process. One of the central purposes of this chapter is to give an overview of the "health" of Canadian democracy by surveying Canadians before, during and after the 2019 Canadian federal election.

Canadians, broadly speaking, appear to have been very interested in the election campaign and are quite interested in politics generally. However, their levels of political discussion and participation do not measure up to the high levels of political interest they report. They do not frequently engage in political discussion with family, friends or co-workers, nor do they often participate in political activities offline. Those who participate in political conversations online are more interested in politics, more knowledgeable, and tend to feel more personally capable of effecting political change than those who do not.

We also find that Canadians have middling knowledge of political and policy issues relevant to making informed voting decisions, but they tend to be uninformed rather than misinformed — meaning they are more likely to say they do not know the answer to a policy question than to give a wrong answer. Perhaps unexpectedly, exposure to the news media is linked to both more correct and incorrect beliefs about public policy.

Political interest and knowledge among Canadians

Respondents in all nine waves of our survey indicated high levels of interest in the election campaign and in politics more generally, but does that interest translate into knowledge of politics? We asked four factual questions to gauge Canadians' general knowledge of politics, asking them to identify: 1) the party that came second in seats in the 2015 election; 2) the current unemployment rate in Canada; 3) the placement of the Liberal party to the left of the Conservative party on a 0 to 10 ideological scale; and 4) the placement of the NDP to the left of the Liberal party on a 0 to 10 ideological scale. This 0 to 4 scale of political knowledge is used throughout this report. Forty-one percent of respondents did not know who came in second in seats in the 2015 campaign, while a full 61% couldn't identify the unemployment rate. Forty-three percent of respondents failed to place the Liberals to the left of the Conservatives, while 59% couldn't place the NDP to the left of the Liberals. A sizable block of Canadians is alarmingly uninformed about the very basics of politics in this country.

> **" A SIZABLE BLOCK OF CANADIANS IS ALARMINGLY UNINFORMED ABOUT THE VERY BASICS OF POLITICS IN THIS COUNTRY"**

We can also evaluate Canadians' knowledge of policy relevant to making an informed voting decision for the election. We argue that making an informed decision relies, at least in part, on knowledge of how government policy and performance compares to a benchmark set at the beginning of the government's term. We asked respondents a battery of 21 policy questions in Wave 9 to evaluate their capacity to engage in retrospective evaluation. More specifically, we asked whether they believed a series of indicators (e.g. unemployment rate,

defence spending) have increased or decreased since 2015.[1] We randomly assigned questions so that each respondent received 10 out of the 21 questions. We scored each question based on respondents' accuracy or if they noted their uncertainty in the answer. We then sum up the total number of questions they got right or wrong. We make the distinction here between people who are uninformed (i.e. noted uncertainty) and those who are misinformed (i.e. gave an incorrect response). We plot the distribution of correct and incorrect responses in **Figure 2.2.1.**
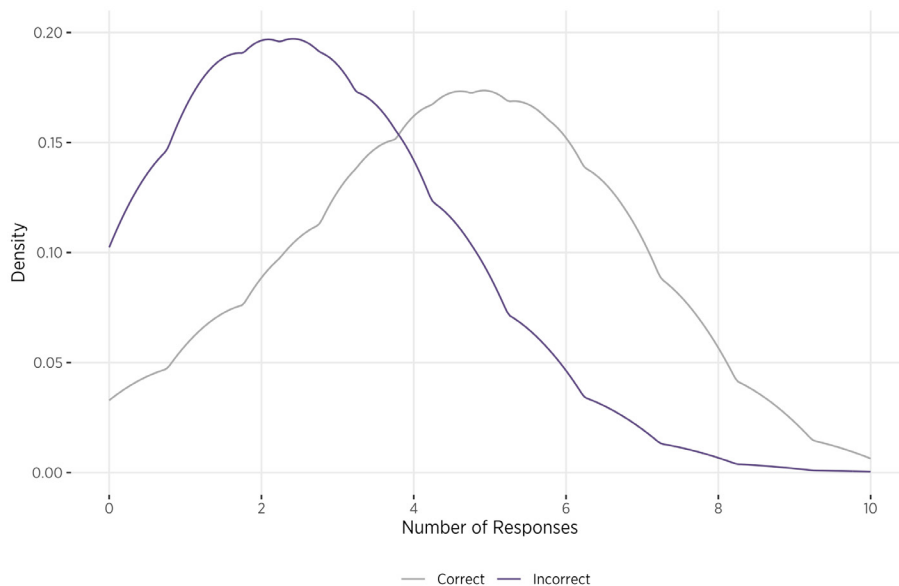

Figure 2.2.1. Distribution of correct and incorrect responses to policy knowledge battery.

As is clear, our respondents were more right than they were wrong about these policy questions. On average, respondents got 4.5 questions right to 2.5 questions wrong. They were also more likely to be unsure than to get a question wrong, reporting uncertainty three times on average.

Finding: Canadians have middling levels of political and policy knowledge, but they are correctly informed more often than they are misinformed. Canadians also tend to be uninformed about policy rather than misinformed.

The above analysis raises questions about what types of factors lead Canadians to have more correctly informed or misinformed beliefs about public policy. We would expect that their general knowledge of politics would be associated with more correct beliefs and fewer misinformed beliefs. Ideally, we would also see a positive relationship between consumption

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1   Unemployment rate (decreased); inflation rate (increased); wages for middle income earners (increased); interest rates (increased); inequality (decreased); poverty (decreased); budget deficit (increased); debt-to-GDP ratio (increased); federal spending on defence, welfare and social services, health care, immigration, environment and infrastructure (all increased); immigration levels (increased); refugee intake (increased); violent crime (increased); gun violence (increased); effective tax rates on middle income earners (decreased), high income earners (decreased), and the corporate tax rate (decreased, with the increase in the small business deduction).

of political news and correct beliefs, and a negative relationship between news consumption and incorrect beliefs.[2] We estimated a pair of models using regression analysis to evaluate the factors that are associated with correct and incorrect beliefs. This allows us to show the expected difference in the number of correct or incorrect responses for people with, for example, high or low levels of news exposure, controlling for other factors.[3] That is, for two people with different levels of news exposure, how accurate would we expect their responses to be when they have identical levels of general political knowledge, political interest, partisan strength, and so on? The full table of predictions from our models can be found in **Table 2.2.1** in Appendix A.

> **" EXPOSURE TO THE NEWS MEDIA IS AT LEAST AS LIKELY TO MISLEAD AS IT IS TO CORRECTLY INFORM"**

We find that general political knowledge has the expected effect. Respondents with the highest levels of political knowledge are expected to give 0.9 more correct responses, and 0.7 fewer incorrect responses, than those with the lowest level of general political knowledge. This nets out to 1.6 more correct than incorrect responses, compared to those with low levels of knowledge. In contrast, political interest has no such effect on policy knowledge after controlling for general political knowledge and the other factors in our model.

News exposure, somewhat surprisingly, is associated with more correct and incorrect responses after controlling for general political knowledge, interest and the other factors in our models. Someone with a high level of self-reported news exposure is expected to give 1 more correct response and 1.2 more incorrect responses than someone with low levels of news exposure. This nets out to 0.2 more incorrect than correct responses compared to those with low levels of news exposure. Exposure to the news media is at least as likely to mislead as it is to correctly inform. This does not mean that journalists deliberately misinform people. The news media transmits perspectives and arguments from a variety of political actors — not all of which may be truthful or accurate. Perhaps even more importantly, citizens who have strong political beliefs may selectively engage with information provided by the media such that they draw incorrect conclusions. The important point, though, is that political news as currently delivered to Canadians is not an antidote to misinformation.

Finding: Exposure to the news media is associated with both more correct and incorrect beliefs about public policy. At a minimum, the news media does not make citizens more informed about policy on average, and if anything makes them net less well-informed.

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2   We asked respondents whether or not they read or watched political news on a variety of news outlets over the past week. These outlets will be introduced later in the chapter. We sum up the total number of outlets visited as a measure of news exposure. This measure will be repeatedly used throughout the remainder of the report.

3   Model calculated using ordinary least squares regression. We asked respondents to rate the strength of their attachment to a party (very strong, fairly strong, not very strong). Non-partisans were scored the lowest. We evaluated ideology with a 0 to 10 self-placement scale where 10 indicates right and 0 indicates left. We folded this scale for a measure of ideological extremity (0 to 5 where 5 is the most extreme). These measures are used throughout the remainder of the report. We also control for gender, education, age and region in all models used in this report.
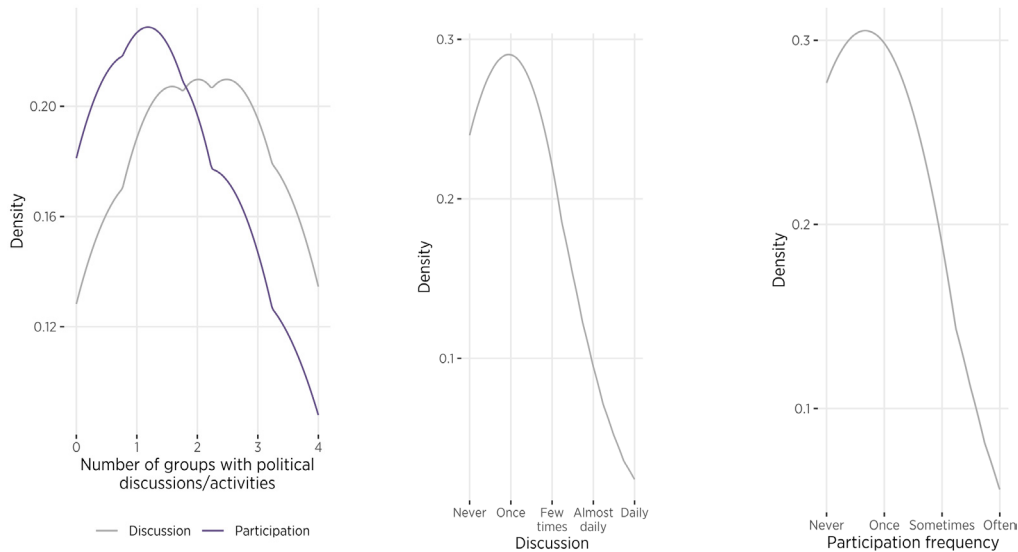
Figure 2.2.2. Distributions of the average number of groups with political discussions (centre) and number of different political activities (left), and distributions of the average frequency of political discussions (centre) and activities (right).

Political discussion and participation

Canadians are deeply interested in politics, even if their knowledge of politics is wanting in many ways. However, a healthy democracy requires citizens to be not just interested in and knowledgeable about politics, but to participate as well. We evaluated the degree to which our survey respondents both discuss and participate in politics. We asked respondents how often in the past week they discussed politics with their family, friends, co-workers, and with people online. We asked these questions in survey Waves 3, 8 and 9.[4]

Seventy-one percent of respondents discussed politics with their family at least once, while 61% talked about politics with their friends. The most common response in each case was discussing politics "a few times" in the past week. In contrast, only 38% of respondents discussed politics with co-workers, and only 34% discussed politics online. Most respondents said they "never" discussed politics with co-workers or online. We plot the distribution of the total number of groups respondents discussed politics with over the past week in the left panel of **Figure 2.2.2**. Respondents engaged in political discussion with two groups in our list on average. We also plot the distribution of the average frequency of political discussion with our listed groups in the right panel of **Figure 2.2.2**. Respondents engaged in political discussion on average only once with our listed groups in the past week.

> *" CANADIANS DISCUSS POLITICS AT ONLY MODEST LEVELS, EVEN IN THE MIDST OF A SHARPLY CONTESTED FEDERAL ELECTION"*

There is some evidence that political discussion increased as the campaign progressed. The

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4   Response categories were never, once, a few times, almost every day, and every day.

average number of groups with which respondents discussed politics increased from 1.6 in Wave 3 to 2.1 in Waves 8 and 9. These are small but statistically significant differences. On the whole, however, Canadians discuss politics at only modest levels, even in the midst of a sharply contested federal election.

In Wave 7 of our survey, we asked respondents how frequently they engaged in a number of political activities over the past year, including purchasing products for political, ethical or environmental reasons, signing a petition, attending a protest, and volunteering. Forty-three percent of respondents bought products for political reasons, 49% signed a petition, 39% volunteered, and 20% attended a protest. The distribution of the number of activities respondents engaged in is displayed in the left panel of **Figure 2.2.2**. On average, respondents engaged in 1.5 of these activities over the past year, with a sharp drop-off after that point. These modest levels of participation are mitigated further by the frequency with which Canadians participated in these activities. They had participated in these activities over the past year somewhere between never and once on average. The distribution of the average frequency of engaging in our listed political activities is shown in the right panel of **Figure 2.2.2**.

Finding: Canadians' levels of political discussion and participation do not match the high levels of political interest they report. They do not frequently engage in political discussion with family, friends or co-workers, nor do they often participate in democratic life through signing petitions, engaging in political consumerism, volunteering or attending protests.

Political efficacy and participation

Canadians' high levels of interest in politics is somewhat at odds with relatively low levels of political participation and discussion. This could be, at least in part, because of their relatively middling levels of political efficacy. There are two dimensions of political efficacy that are of interest to understanding political participation: *internal efficacy*, or the confidence citizens have in their ability to participate in democratic life, and *external efficacy*, or the confidence citizens have that politicians are responsive to their values and interests.

Efficacy has important implications for political participation. If you believe your interests are not being represented by elected officials, or question your ability to effectively participate in democratic politics, you are liable to avoid discussing and participating in politics.

We measured internal and external efficacy with an index constructed from a series of survey questions then re-scaled 0 to 100, where 100 indicates the highest possible efficacy.[5] These questions were asked in Waves 5, 6, 7 and 8.

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5   The internal efficacy questions were: 1) I think that I am better informed about politics and government than most people; 2) I consider myself to be well qualified to participate in politics; 3) I feel that I have a pretty good understanding of the important political issues facing the country; and 4) I feel that I could do as good a job in office as most people (Strongly agree to strongly disagree, 5-point scale). The external efficacy questions were: 1) Ordinary people can influence the government; 2) Public officials care what ordinary people think; 3) People like me don't have any say about what the government does; 4) I don't think public officials care much what people like me think (Strongly agree to strongly disagree, 5-point)
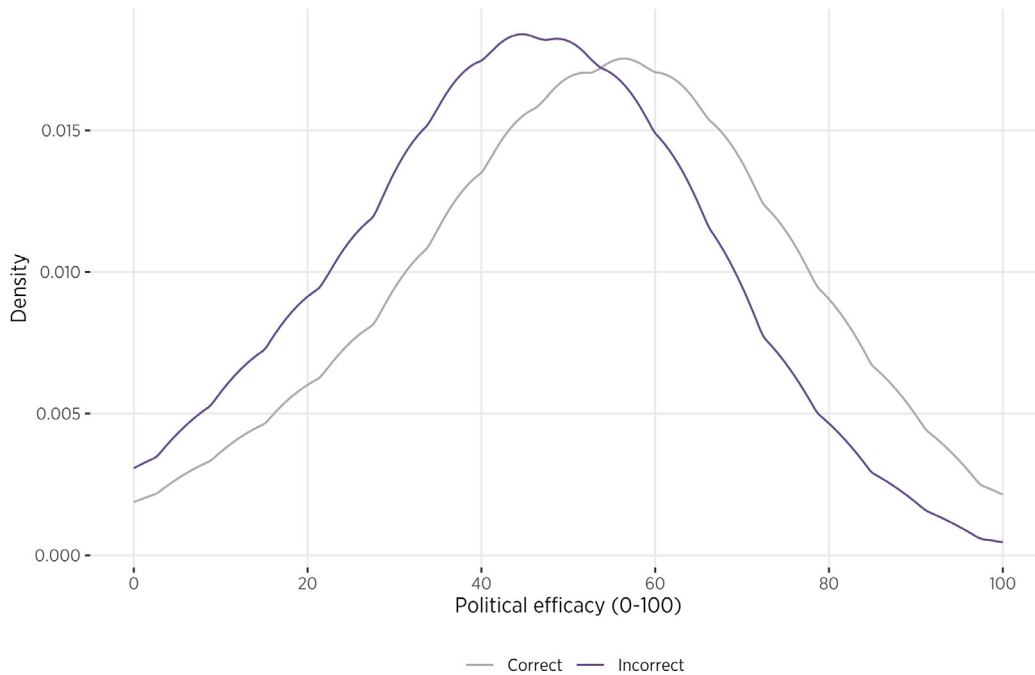
Figure 2.2.3. Distribution of internal and external political efficacy.[6]

Canadians appear not to be particularly politically efficacious, and they are much less externally efficacious than internally efficacious (44 vs. 53 on the 0 to 100 scales). In other words, our respondents had notably more confidence in their ability to participate in democratic life than in politicians being responsive to their interests while in office.

We also looked at the relationship between political efficacy and political discussion and participation. We used our measures of political discussion and participation to create an index of each running from 0 to 100 that combines the frequency of discussion with the number of groups with which respondents discussed politics, and the frequency of political participation with the number of different activities that respondents engaged in. In each case, 100 indicates respondents with maximum levels of discussion or participation. We used regression analysis[7] to estimate the effect of internal and external efficacy on both discussion and participation, holding constant other factors that might be linked to both concepts. For example, we can show the expected difference in discussion or participation between people with high and low efficacy when they have identical levels of political interest, news consumption, and so on. The estimated predictions are shown in **Table 2.2.2** in Appendix A.

Internal efficacy, rather than external efficacy, has strong effects on political discussion and participation. Someone with the highest level of internal efficacy is expected to have polit-

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6   Internal and external efficacy each composed of an index of four questions (Strongly agree to strongly disagree, 5-point scale) and rescaled from
      0 to 100 where 100 represents respondents who are maximally efficacious.
7   Ordinary least squares regression

ical discussion scores 10 points higher and participation scores 13 points higher compared to a person with the lowest level of internal efficacy (on a 0 to 100 scale) after controlling for other factors. There is no significant effect for external efficacy. This means Canadians' feelings that they have the capacity to understand and get involved in politics are more important in explaining their levels of political discussion and participation than their feelings that the political system is responsive to their interests.

Political interest also matters, perhaps unsurprisingly. People who are the most interested in politics (10 on the 0 to 10 scale) score 17 points higher in political discussion and 6 points higher in political participation than those with the lowest levels of interest, holding efficacy and other factors in our models constant. News exposure is also significantly related to discussion and participation, as we might expect, though the causal direction is not entirely clear. People who are more active in politics may consume more news about politics, or their consumption of news may drive greater levels of political participation and discussion.

Finding: Internal efficacy — the belief that one has the capacity to understand and participate in politics — is a fundamentally important factor in explaining why Canadians discuss and participate in politics. External efficacy is comparatively less important.

Active online participants

Our research draws heavily on the political participation of Canadians on Twitter and Facebook. Those who take an active role in politics online are studied in depth, yet we do not know much about their other forms of political activity. Using a survey administered
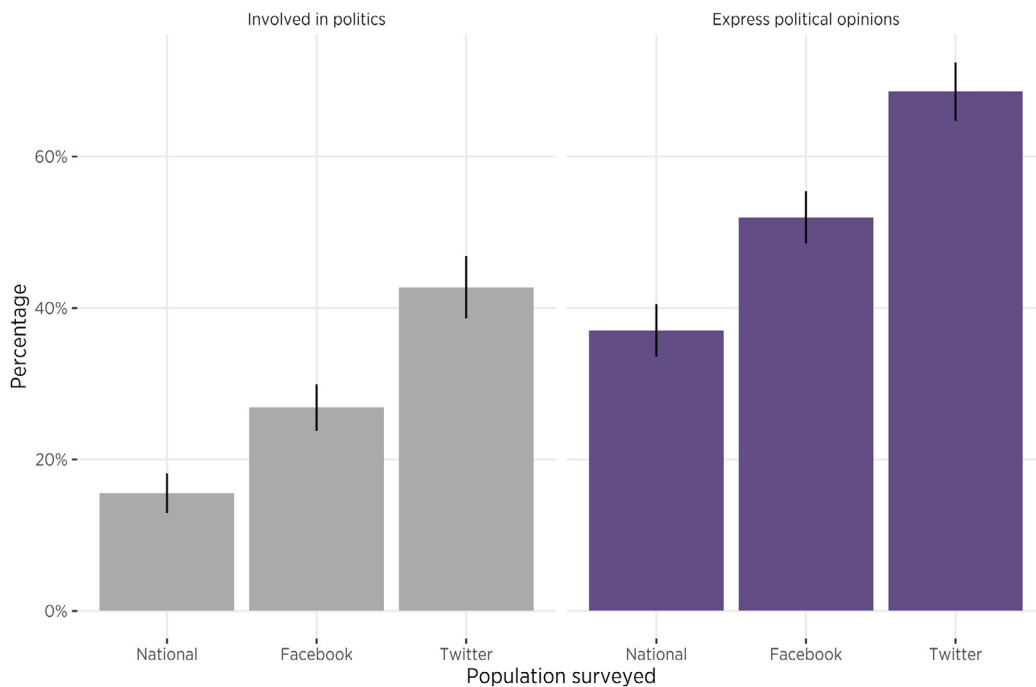

Figure 2.2.4. Percentage of population who self-report as being involved in politics and expressing political opinions

to politically engaged Facebook and Twitter users, we were able to evaluate a number of political involvement and knowledge characteristics and compare these online populations to their offline counterparts.

We found in Chapter 2.1 that approximately 30% of Canadians use Facebook and 16% use Twitter for political news. What makes these platforms different from other news sources is that they allow any user to express their opinions and potentially shape the conversation. Canadians who are drawn to these platforms are indeed more likely to share their political opinions. **Figure 2.2.4** shows the percentage of our respondents who said they are involved in politics and have discussed politics often over the past year. Approximately 37% of the general Canadian population say they often share their political opinions, in contrast to 68% of Twitter users and about 50% of Facebook users. Given this emphasis on expressive politics on both Facebook and Twitter, it is no surprise that they are the principal tools used by political journalists and candidates to discuss political issues.

We further assess the extent to which those who are politically active online are more interested in politics, more knowledgeable, more politically active in offline spaces (signing petitions, boycotting products, protesting and volunteering in their community), and feel more internally efficacious.
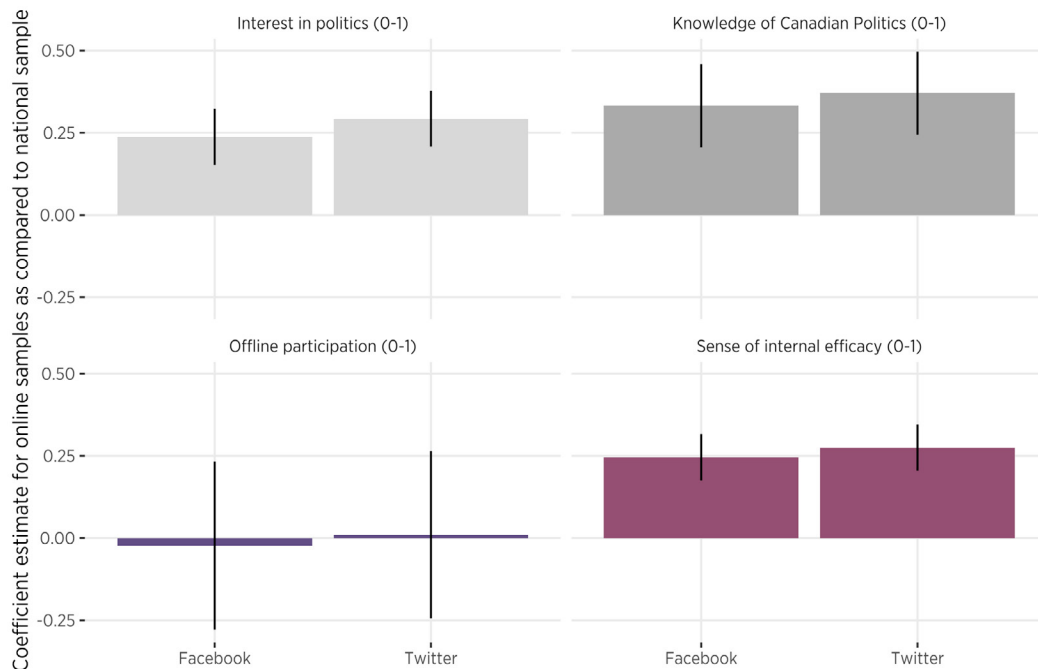

Figure 2.2.5. Difference between national and online samples across four measures of political involvement and knowledge

Figure 2.2.5 shows the difference between our Twitter and Facebook samples and the nationally representative population. A bar and error bar above 0 indicates higher interest, knowledge, offline participation and internal efficacy (all rescaled from 0 to 1). We find that, even after controlling for a range of socio-economic factors (age, gender, region, language and employment status), those who participate in online conversations are more interested in politics, more knowledgeable and tend to feel more personally capable of effecting political change. We also find that those who participate online are equally likely to participate politically in offline spaces. There is not a large difference across these measures between those who are politically active on Twitter as compared to those on Facebook.

Finding: Those who participate in online conversations show greater interest in politics, express their political opinions more, have higher knowledge of politics and political efficacy, and are just as likely to participate in politics offline as they are online.

2.3 Fact-checking

Fact-checking as a journalistic practice has grown in prominence in the past few years. It has been estimated that the number of fact-checking outlets around the world has quadrupled since 2014.[1] Our surveys found that fact-checking enjoys widespread support across all segments of Canadian society, though support is somewhat lower among those who do not trust the news media and among ideological conservatives.

Even as fact-checking gains public profile and acceptance, debate continues over whether it is effective in informing the public or changing the minds of people who are inclined to reject information that contradicts their beliefs. We find that fact-checks appear to work even for partisans for matters that have inconvenient implications, leading to convergence in the factual beliefs of partisans of different stripes. However, there is little evidence that correcting an individual's factual beliefs influences their opinions on related policy matters. Further, we find that journalists are no more convincing than politicians or unaffiliated Twitter users when it comes to fact-checks — which could have troubling implications for journalism as parties and their supporters increasingly adopt the language of fact-checking.

Public support for fact-checking

We asked respondents a pair of questions to gauge their support for fact-checking in journalism in Wave 5 of our survey, fielded from Sept. 19 to 24. Respondents were in broad agreement that fact-checking is valuable in politics. Fifty-three percent indicated they favoured the practice, while only 14% expressed any level of opposition. An overwhelming 73% indicated they wanted more fact-checking in journalism, while only 3% wanted less of it. These results are plotted in **Figure 2.3.1.**
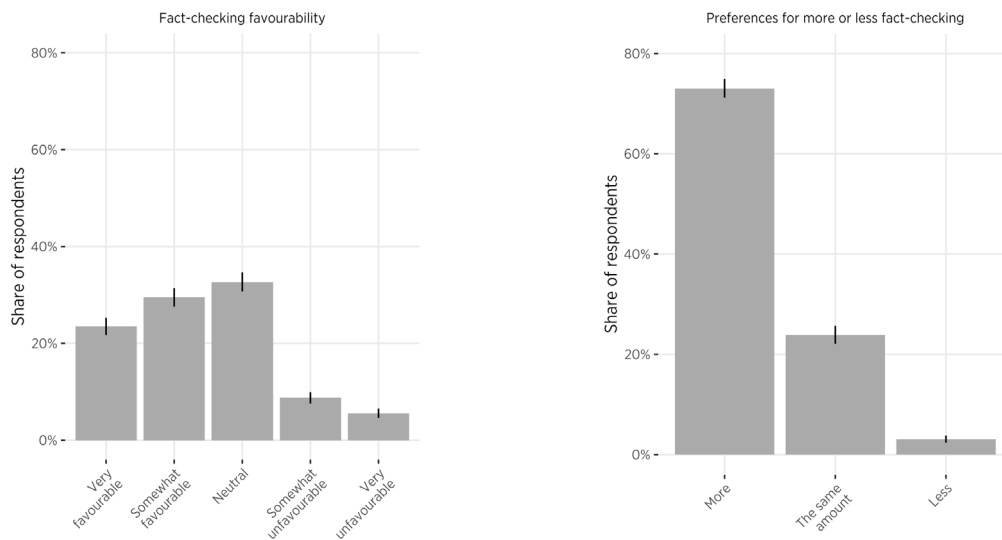

Figure 2.3.1. Favourability of fact-checking (left panel); desire for more or less fact-checking by journalists (right panel)

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1   Stencel, M. June 11, 2019. Number of fact-checking outlets surges to 188 in more than 60 countries. Poynter.

Our survey allows us to explore factors that might drive support or opposition to fact-checking. We averaged our two measures of fact-checking support to construct a scale that runs from 0 to 1, where 1 is the most supportive of fact-checking. We estimated a model with regression analysis to predict support for fact-checking. This allows us to examine the relationship between, say, ideology and fact-checking support, holding constant all other factors in our model. For instance, how much would we expect fact-checking support to change between left-wing and right-wing individuals who have similar levels of trust in the media, political knowledge and news exposure?

The predictions from the model estimates are displayed in full in **Table 2.3** in Appendix A. Media trust appears to be linked to support for fact-checking, which is not surprising because journalists are the main source of fact-checks. We measured trust in the media in this wave with an index of four questions scaled from 0 to 1, where 1 is the most trusting of the news media.[2] Respondents who were the most trusting in the news media were 18 points more supportive of fact-checking compared to those who were the least trusting, holding all other factors constant.

> **"RESPONDENTS WHO WERE THE MOST TRUSTING IN THE NEWS MEDIA WERE 18 POINTS MORE SUPPORTIVE OF FACT-CHECKING COMPARED TO THOSE WHO WERE THE LEAST TRUSTING"**

Right-wing ideology is also linked to opposition to fact-checking. Respondents who scored themselves as the most right-wing on a 0 to 10 ideological self-placement scale (i.e. 10) were 8 points less supportive of fact-checking than those who identified themselves as the most left-wing (i.e. 0). This is true when controlling for media trust. Finally, those with high exposure to partisan-congenial media sources are 7 points less supportive of fact-checking than those with no exposure. It is important to keep the baselines in mind when interpreting these results, however. Fact-checking still commands majority support among those least trusting of the media (0.68) and the most right-wing (0.72).

In contrast, political knowledge and interest are both associated with support for fact-checking. Respondents who were the most knowledgeable of, or interested in, politics scored 8 and 7 points higher in their support for fact-checking, respectively, compared to those with low levels of either. Again, these findings do not take away from the central point that support for fact-checking is overwhelming across Canadian society.

Finding: Fact-checking enjoys widespread support across all segments of Canadian society, though such support is somewhat lower among those who do not trust the news media, and among ideological conservatives.

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2   Model constructed with ordinary least squares regression. Questions: 1) I trust the mass media — such as newspapers, TV, and radio — to report the news fully, accurately and fairly; 2) The news posted online by news organizations is accurate; 3) I have confidence in the people running the press; 4) When dealing with political and social issues, news organizations deal fairly with all sides (strongly agree to strongly disagree; 5-point scale)

Effectiveness of fact-checking

It is clear that the practice of fact-checking has widespread support in Canada, but whether fact-checking is effective is another question entirely. As outlined in Chapter 2.2, we asked respondents a series of fact-based questions relevant to important topics in Canadian public policy in survey Waves 1 and 9. We found that Canadians were more uninformed than they were misinformed about important facts related to public policy, meaning they were more likely to say they were "unsure" about the answers to questions about public policy than they were to answer incorrectly. We showed that the tendency of Canadians to be misinformed about policy was related to their high exposure to news consumption, especially via social media. We also found that this pattern was particularly pronounced among respondents who strongly identified with a political party.

We argue that highly motivated partisans integrate information that best serves their interests and identities with their beliefs about the world. Political journalism often provides information that can contribute to this kind of motivated reasoning by focusing on the cut and thrust of political debate. This raises the question of whether it is even possible to correct misperceptions with correct information. Researchers are increasingly finding that fact-checks are effective at informing citizens, even when a fact is inconvenient for a partisan group.[3] However, it is always possible that highly motivated partisans may simply reject information that is inconvenient for them.

We asked respondents one of our fact-based, environmental questions from our Wave 1 survey a second time in Wave 2: "Is Canada on track to meet its climate change commitments under the Paris Accord?" Respondents could answer yes, no or unsure. We randomly assigned respondents into two groups before asking this question. One group received the following correction from a real news story:

> *"Canada is further away from meeting its emissions reduction targets under the Paris agreement than it was a year ago, according to new government projections, though Environment Minister Catherine McKenna insists Canada will achieve its climate change goals. New numbers released by Environment Canada on Thursday show that Canada is on track to fall 79 megatonnes short of its 2030 greenhouse gas emissions targets. That's up from 66 megatonnes last year."* [4]

The other group received no such correction. The results, shown in **Figure 2.3.2**, suggest corrections are helpful at making Canadians better informed: only 42% of respondents got the question right without the correction, but this increased to 54% among those who received the correction. However, this increase came primarily from uninformed rather than misinformed respondents. The number of people who said they were unsure of the answer was 10 points lower for those who received the correction compared to those who did not, while the number of those who were misinformed was just 2 points lower among those who received the correction.

3   Nyhan, B., et al. 2019. Taking fact-checks literally but not seriously? The effects of journalistic fact-checking on factual beliefs and candidate favorability. Political Behavior, 1-22; Wood, T., and Porter, E. 2019. The elusive backfire effect: Mass attitudes' steadfast factual adherence. Political Behavior, 41(1), 135-163.

4   Forrest, M. Dec. 20, 2018. Canada further from Paris targets than last year, new projections show. National Post.
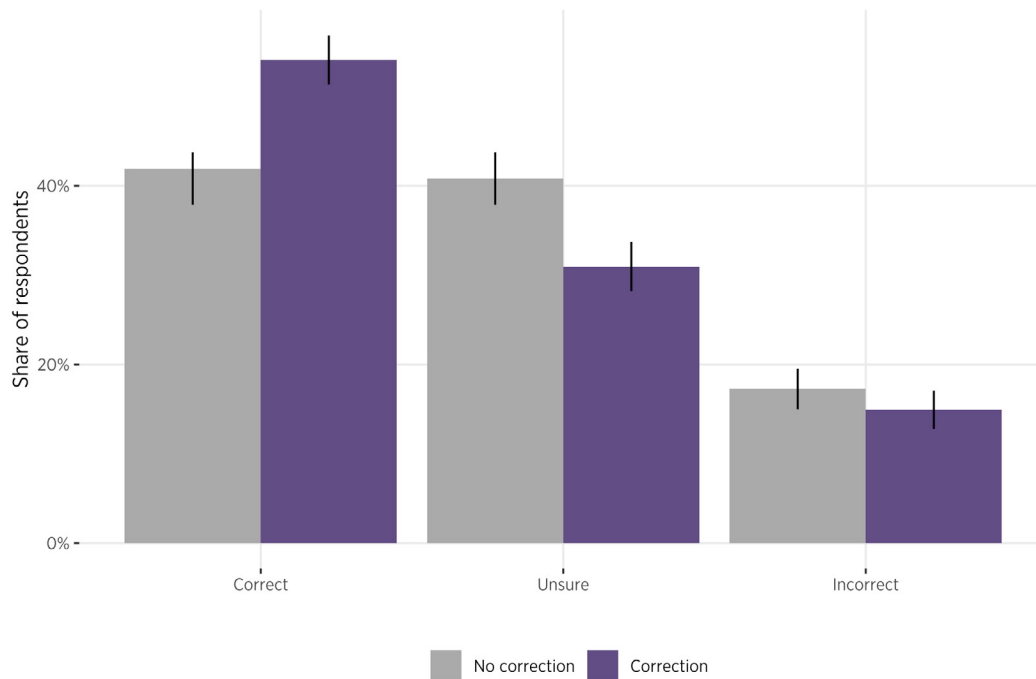
Figure 2.3.2. Share of respondents' answers on environmental fact question with correction (treatment) and without correction (control).

This means the correction was effective at making our respondents more informed, but did not make them much less misinformed. It persuaded respondents who were unsure of whether or not Canada would meet its Paris Accord commitments, but was less effective at influencing those who incorrectly believed Canada is on track.

Finding: Fact-checking is modestly successful in correcting directly related factual beliefs.

There is also some evidence that this correction was effective regardless of partisanship. The results broken down by partisans of the major parties are shown in **Figure 2.3.3.** Liberal partisans were the least likely to be correctly informed without the assigned correction. Only 33% of Liberals got the answer right, compared to 47% of Conservatives and 57% of NDP partisans. This may not be surprising because the fact could reflect poorly on the incumbent Liberal government. However, when given a correction, 49% of Liberal partisans got the answer right — a 16-point increase. The correction also increased the share of Conservatives who got the answer right by 10 points. The end result is that partisans converged in their beliefs about whether Canada is on track to meet its Paris Accord commitments.

In sum, it is possible to correct beliefs on important policy-relevant facts, even when such facts are inconvenient for audiences with partisan leanings. We were able to correct many of our respondents' beliefs about an objective, verifiable fact: whether Canada is on track to meet its Paris Accord commitments.
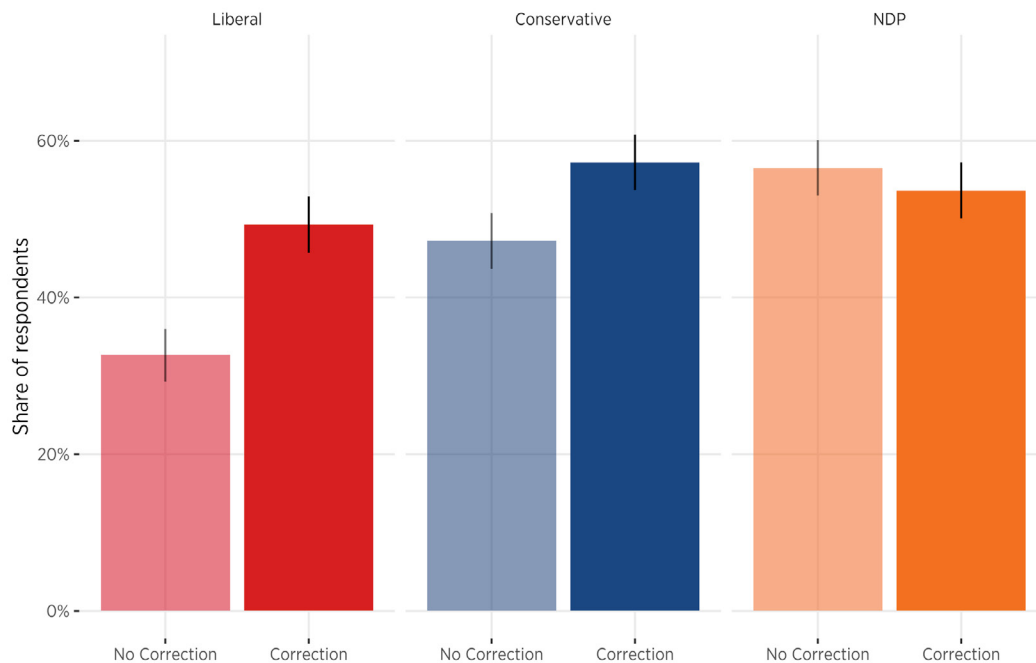
Figure 2.3.3. Share of respondents' answers on environmental fact question with and without correction by partisan group

Finding: Fact-checks appear to work on partisans for matters that have inconvenient implications, leading to convergence in the factual beliefs of partisans of different stripes.

More substantively, we wanted to see if this correction would have an influence on other, higher-order beliefs. The fact that Canada will fail to meet its Paris Accord commitments is deeply troubling considering the Accord is one step in a long road to head off the catastrophic effects of climate change. Being informed of this fact should ideally have an influence on the policies citizens are willing to endorse to combat climate change. We might expect knowledge of this fact to increase support for stronger climate-mitigation policy.

In fact, we find no evidence that this is the case, on average. For example, support for the carbon tax was virtually identical for respondents who received the correction (35%) and those who did not (36%).

The upshot is that we have the capacity to make average Canadians better informed about policy-relevant facts. However, we found no evidence that this has meaningful effects in public opinions about policy more broadly in this case. We were able to inform our respondents that Canada is not reducing greenhouse gas emissions fast enough to meet our international obligations, but this did not have significant effects on their opinions about strengthening carbon taxes or other climate mitigation strategies.

Fact-checking and source credibility

Our finding that fact-checking does not appear to affect individuals' policy attitudes may be troubling for observers who hope that fact-checking can lead to better informed opinions. However, it is in line with previous findings showing that partisans will find ways to rationalize certain facts to maintain their prior beliefs and support their political allegiances.[5]

Nonetheless, fact-checks ultimately do what they set out to do — they correct peoples' factual beliefs. It is not surprising, then, that fact-checking has gained prominence in the past several years. By far the most common form of fact-checking is by journalists aligned with mainstream news outlets, though in the United States, this form of fact-checking is supported by dedicated fact-checking organizations such as Snopes that operate independently from news organizations.

> *" ARE 'FACT-CHECKS' BY POLITICIANS OR UNKNOWN ACTORS AS EFFECTIVE AS FACT-CHECKS FROM JOURNALISTS? IF SO, THIS WOULD BE A TROUBLING LIMITATION OF FACT-CHECKING IN PRACTICE"*

These are not the only actors that engage in fact-checking. Politicians and parties, for instance, have increasingly adopted the language of fact-checks. Both the Liberal and Conservative parties issued releases praising their own platforms or attacking the opposing party under the guise of dubious "fact-checks." For instance, on Oct. 12, 2019, the Conservative party issued a "fact-check" declaring that "Trudeau is desperately lying about our Conservative plan to build infrastructure," which attacked the record of the incumbent government and reiterated the Conservative campaign commitment.[6] This isn't a new practice. The Liberal party issued a series of news releases dubbed "fact-checks" in the 2015 Canadian federal election, such as one declaring, "Fact Check: Trudeau will deliver tax fairness for families, workers, and seniors."[7] Recently this trend has escalated in the United Kingdom, with the U.K. Conservatives temporarily rebranding their Twitter account as "factcheckUK." [8] Politicians and political parties are eager to cash in on the credibility of fact-checks and may bring the practice into disrepute in the process.

The fact that other political actors can use the rhetoric of fact-checks without engaging in the rigour of professional journalists or fact-checking organizations raises the question as to whether citizens are persuaded by these less credible fact-checks. In other words, are "fact-checks" by politicians or unknown actors as effective as fact-checks from journalists? If so,

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5   Nyhan, B., et al. 2019. Taking fact-checks literally but not seriously? The effects of journalistic fact-checking on factual beliefs and candidate favorability. Political Behavior, 1-22.

6   Conservative Party of Canada. Oct. 12, 2019. Fact Check: Trudeau is desperately lying about our Conservative plan to build infrastructure.

7   Liberal Party of Canada. Oct. 12, 2015. Fact Check: Trudeau will deliver tax fairness for families, workers, and seniors.

8   Perraudin, F. Nov. 20, 2019. Twitter accuses Tories of misleading public with 'factcheck' foray. The Guardian.

this would be a troubling limitation of fact-checking in practice.

We asked respondents who they trusted to deliver objective and accurate information about the upcoming federal election in Wave 1 of our survey, as outlined in Chapter 2.1. Respondents trusted the traditional news media (5.6) at levels that approached their family and friends (6.0) on a scale of 0 to 10, with 10 being the highest. They trusted politicians (4.8) and the information they received on social media (3.3) far less. Among the news outlets we measured, CTV was the most trusted (6.1), followed closely by La Presse (6.0), CBC (5.9), Global News (5.9), and the Globe and Mail (5.9). These findings suggest Canadians are attentive to the sources of information they encounter in political discourse. They trust journalists from established outlets such as these and may be more willing to accept information provided by them, as opposed to politicians or people they encounter on social media.

Here we examined whether the source of the fact-check has any influence on its effectiveness at correcting factual beliefs. In Wave 3 of our survey from Aug. 28 to Sept. 5, we randomly assigned respondents to receive fact-checks on two issues: the trend in Canada's greenhouse gas emissions since 2015 (answer: lower), and the current violent crime rate compared to the past decade (answer: lower). In both fact-check scenarios, the source of the misinformation was a fictional member of Parliament.
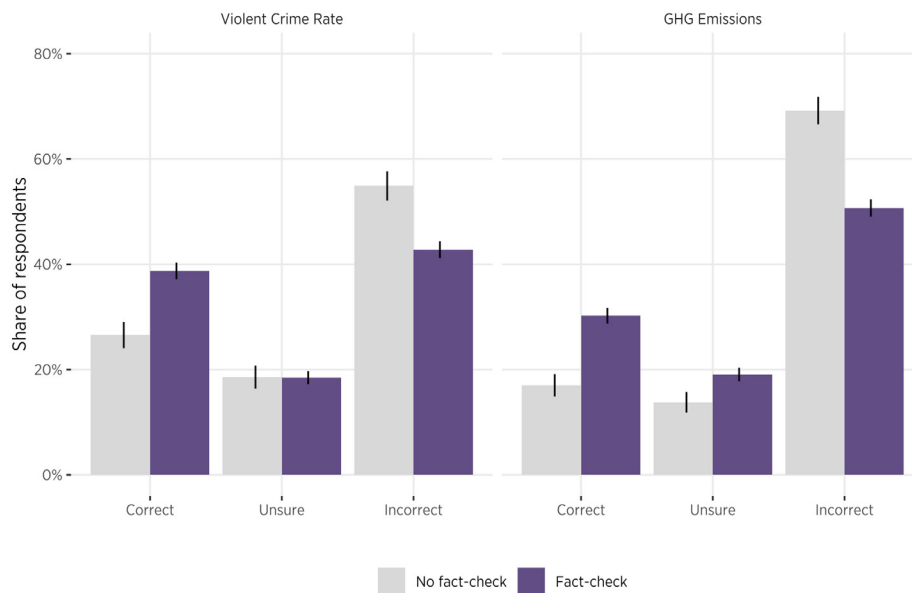

Figure 2.3.4. Effectiveness of fact-checks on respondent perceptions toward the violent crime rate and changes in greenhouse gas emissions

All respondents were provided with both incorrect facts, and they were randomly assigned to receive a fact-check from one of three sources — a CBC journalist, an MP or an unaffiliated person on Twitter — or to receive no fact-checks at all. (All actors in these fact-checking scenarios were fictional.) After receiving the information, respondents were asked to rate the accuracy of the politician's original claim, or to say they were unsure.

Ideally, fact-checks should work at correcting misperceptions, but only when the source of that fact-check is credible. Based on the results of our first survey, we would expect the fact-check from the journalist to be most effective. Fact-checks from social media users and politicians should be less effective, or perhaps not effective at all given the lack of credibility our previous respondents assigned to these sources.

The results from each of our fact-checking manipulations are shown in **Figure 2.3.4**. Respondents who said the politician's claims were definitely or probably true are labelled as "incorrect," and those who thought they were definitely or probably false are labelled as "correct." The fact-checks were once again successful in informing some respondents. For the crime rate question, 55% of respondents who did not receive the fact-check answered incorrectly, compared to 43% who did — a difference of 12 percentage points. For the question about emissions, the share of respondents answering incorrectly was almost 18 points lower among those who received the fact-check than among those who did not. Our fact-checks were once again able to modestly correct our respondents' beliefs about the violent crime rate and Canada's greenhouse gas emissions.

Pooling our two corrections together allows us to compare how respondents react to fact-checks from the three different types of sources in this experiment. Respondents' overall accuracy was scaled from 0 to 100, where 100 is the most accurate, as in respondents rated both claims as definitely false. The average estimated correctness of the respondents for each fact-checking source is displayed in **Figure 2.3.5.**
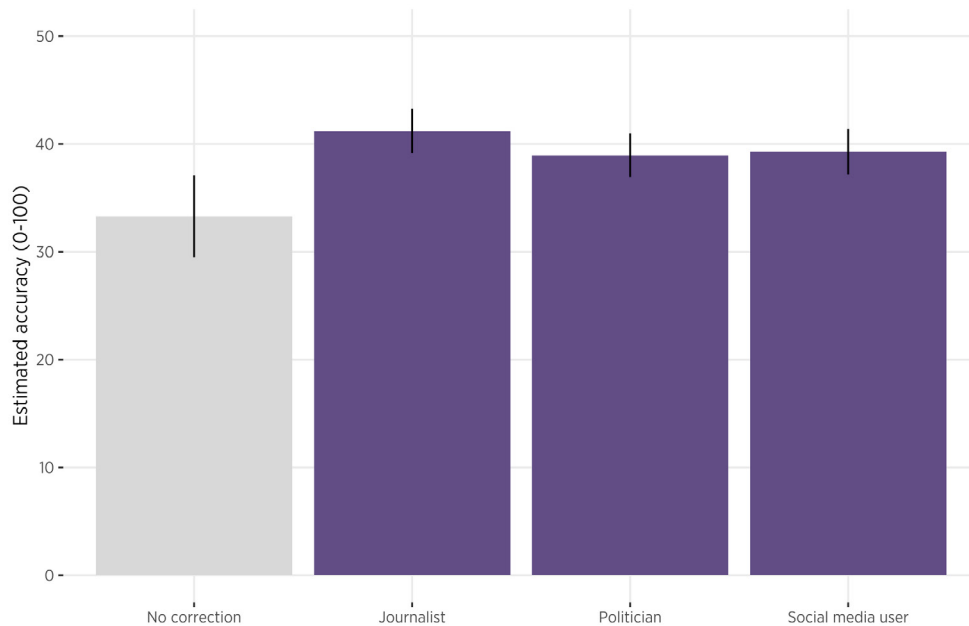

Figure 2.3.5. Average effectiveness of a fact-check by source

As expected, the journalist was the most successful at correcting misperceptions. Respondents' average accuracy was 8 points higher when exposed to the journalist fact-check (41 on the 0 to 100 scale) than when they received no fact-check (33). However, the fact-checks from both the politician and the social media user also significantly improved our respondents' accuracy by 6 points each (39 vs. 33), such that there was no statistically significant difference between the effectiveness of fact-checks from any of the three sources. Respondents were not as responsive to the source of the fact-check as we might expect given our previous respondents' sharply differentiated evaluations of the credibility of different sources.

Finding: Averaged across our two fact-checking studies, all three of our fact-checks successfully corrected respondents. The journalist fact-check, however, was no more effective than those from a Twitter commenter or a politician. Respondents were not particularly responsive to the source of the fact-check.

2.4 Polarization

Political polarization is a growing source of public concern in democracies around the world. While the Canadian political system was long considered one of the least polarized in the world, scholars have argued in recent decades that Canada has been polarizing on a left-right axis. In the United States and other countries, observers have worried that polarization has the potential to reduce the common ground for deliberation in a democracy, driving the public toward more partisan candidates and policies.[1] It can exacerbate negative perceptions toward other groups, contributing to political alienation and making citizens more likely to believe falsehoods about those groups.[2] In recent years, the potential influence of social media and the online information ecosystem in contributing to polarization has become a major topic of academic and policy debate.

The results from multiple waves of our survey reveal that Canadians are affectively polarized: they exhibit dislike of parties or their supporters on the other end of the political spectrum simply because they belong to an opposing group. These feelings apply to official representatives of opposing parties, as well as their supporters. This is troubling because it shows that polarization may not just influence people's opinions about the parties, but also how they view ordinary Canadians.

At the same time, Canadians tend to be ideologically moderate rather than clustering on opposite sides of the ideological spectrum. However, they may also perceive a high level of polarization between parties, as parties become increasingly divergent. This may result in more negative feelings among opposing partisans, independent of their own ideological convictions.

There is far less evidence that the information environment has a polarizing effect on Canadians. In fact, exposure to traditional news media is generally correlated with a decrease in affective polarization. Exposure to positive campaign ads is also shown to reduce levels of affective polarization.

Affective polarization

In the United States, supporters of the two major parties actively dislike one another, while liking members of their own party. This is known as affective polarization, and it is distinct from ideological polarization, in which Americans have increasingly divergent views on political issues.[3] Some scholars have argued that Canadians are polarizing as well,[4] but research has been limited on the degree to which Canadians are affectively polarized.

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1   Prior, M. May 2013. Media and political polarization. Annual Review of Political Science, 16, 101–127.
2   Vaccari, C. March 2018. Online content and political polarization. In Tucker, J.A., et al. Social Media, Political Polarization, and Political Disinformation: A Review of the Scientific Literature. William and Flora Hewlett Foundation.
3   Iyengar, S, Sood, G., and Lelkes, Y. 2012. Affect, not ideology: A social identity perspective on polarization. Public Opinion Quarterly, 76(3), 405–431; Mason, L. 2016. A cross-cutting calm: How social sorting drives affective polarization. Public Opinion Quarterly, 80(S1), 351–377.
4   Johnston, R. Feb. 18, 2014. Canada is polarizing – and it's because of the parties. The Washington Post; Johnston, R. June 2019. Affective Polarization in the Canadian Party System: 1988-2015. Presented at the 2019 annual meeting of the Canadian Political Science Association, Vancouver, B.C.

We examined the state of Canadian polarization in Waves 3, 4 and 9 of our survey.[5] We measured affective polarization in three ways that are adapted from current American public opinion research:

1. **Warmth gap:** We asked respondents to rate their feelings toward each of the major parties on 0 to 100 feeling thermometers. We then calculated the difference between partisan respondents' feelings toward ideologically proximate parties (in-group), and those that are ideologically distant (out-group).

2. **Affect gap:** We asked respondents to rate how well a series of positive and negative words (e.g. honest, intelligent, hypocritical, selfish) describe each party. We tallied up the score for the positive words (positive affect) and negative words (negative affect) and took the difference to find their "net affect" toward in-group and out-group parties. We randomly assigned respondents into two groups: one where the words they evaluated were used to describe voters of the party, and another where they described elected officials and candidates for the party. This allowed us to compare the difference between perceptions of party representatives and perceptions of ordinary voters.

3. **Social distance:** We asked respondents how comfortable they would be if a member of a certain social group was 1) their neighbour; 2) a close friend; and 3) how upset they would be if a son or daughter married a member of a certain group. This was used to create an index of a respondent's social distance from each group (0 to 100), including in-group and out-group parties.

Each of these three measures address different dimensions of affective polarization. We would expect social distance and affect gap measures to be tougher tests of affective polarization because they tap into stronger feelings of hostility and alienation, respectively.

Measuring affective polarization in a multi-party context is difficult. In the United States, there are clear in-groups and out-groups for partisans because there are only two main parties. For our purposes, we averaged feelings toward the NDP and Liberals to represent affect toward left-leaning parties and used feelings toward the Conservatives to represent affect toward right-leaning parties. From that, we can construct in-group and out-group measures based on the partisan identity of our respondents. We restrict these analyses to partisans of the three main parties. However, our results are robust when Green and Bloc supporters are included as well.

We find that Canadians are affectively polarized according to our measure of the warmth gap. Partisans rated their in-group party as 69 degrees on a 0 to 100 feeling thermometer, with 0 meaning the coldest possible feeling and 100 the warmest. On average, partisans were more negative about the out-group party than they were positive about their own, rating them only 26 degrees on the same scale. The gap of 43 points is sizable given the 101-point scale. This is also comparable to what we see in the United States, where out-

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group parties scored 30 points on the 0 to 100 feeling thermometer in 2012, dropping to 23 points in 2016.[6]

As **Figure 2.4.1** shows, Canadian left- and right-partisans had similarly negative feelings toward the out-group party — 27 and 23 degrees, respectively — while right partisans had more positive feelings toward their own party (78 vs. 63). This is not surprising — fragmentation on the left ensures left-leaning voters are divided in their partisan loyalties.
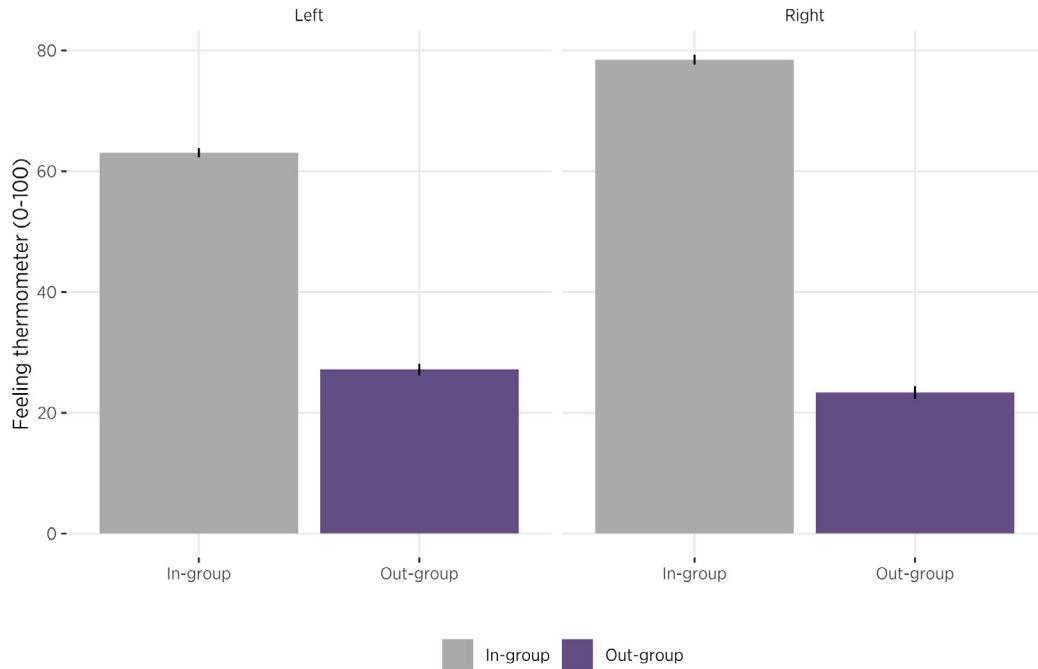

Figure 2.4.1. Average warmth towards in-group and out-group parties (0 to 100) for partisans of the three major national parties.[7]

For stronger tests of the intensity of affective polarization, we turned to our affect gap measure. Respondents were asked to rate how well a number of positive (e.g. honest) and negative words (e.g. selfish) described a party's voters or their candidates and elected officials. The net affect is the difference between the positive and negative measures, with a larger gap indicating a greater degree of polarization. On a -50 to 50 scale, with 0 being neutral, our partisan respondents viewed their in-group party 16 points more positively, while they saw their out-group 7 points more negatively. This 23-point gap in net affect is sizable given the 101-point scale.

6   Abramowitz, A.I., and Webster, S.W. 2017. Taking it to a New Level: Negative Partisanship, Voter Anger and the 2016 Presidential Election. Presented at the State of the Parties Conference, University of Akron, Akron, Ohio.

7   Out-group evaluation is the Conservative party for Liberal and NDP partisans, and an average of feelings towards the Liberal party and NDP for Conservative partisans. The reverse is true for in-group evaluation. Constructed using 0 to 100 feeling thermometers where 100 indicates the respondent likes the party in question, and 0 signals they dislike the party.
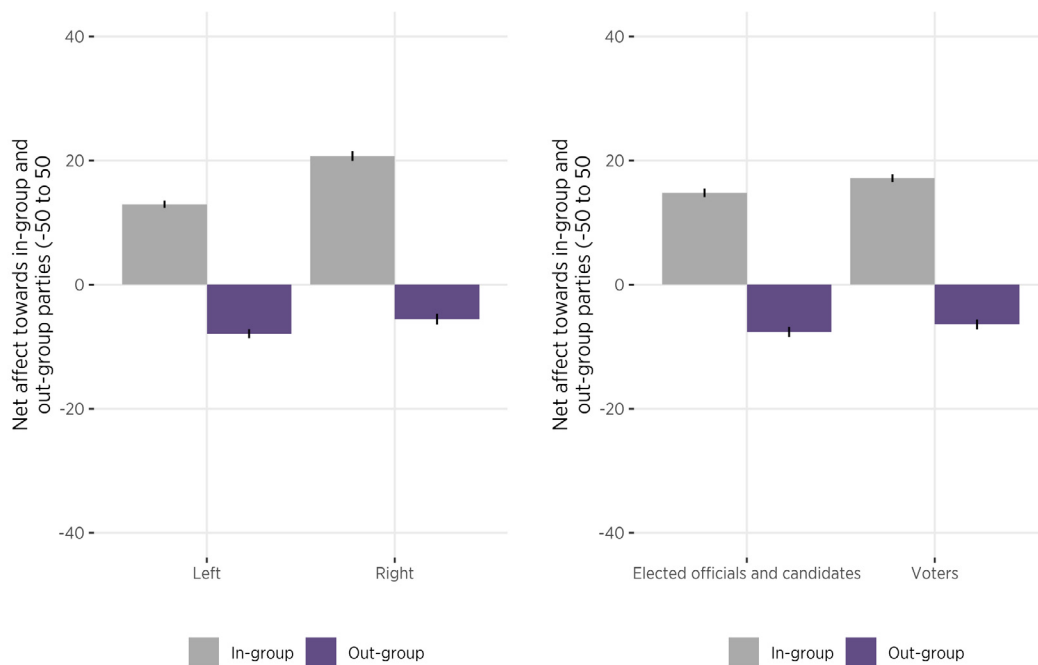
Figure 2.4.2. Net Affect (-50 To 50) for partisans of the three major national parties. Left panel: Difference between left- and right-partisans. Right panel: Difference between groups receiving questions asking about voters or party elites.[8]

This measure reveals some interesting partisan differences. Left- and right-partisans had similar affect gaps (21 and 26 points, respectively), but right-partisans were more positive toward their own party than left-partisans (21 vs. 13), while left partisans were slightly more negative toward the out-group party (-8 vs. -6). This is shown in the left panel of **Figure 2.4.2.**

Second, Canadians do not appear to strongly distinguish between party elites and their voters. We randomly assigned our respondents questions asking them to describe either party officials and candidates, or voters for the party. These results are shown in the right panel of **Figure 2.4.2**. Partisans had slightly less positive feelings toward in-group elites compared to in-group voters, but the effect is small (15 vs. 17). Similarly, partisans were slightly less negative toward out-group voters than elites (-6 vs. -8). These differences are statistically significant, but substantively small. This is troubling, as it suggests polarization does not just influence people's opinions about the parties, but also how they view other ordinary Canadians.

Social distance gives us perhaps our strongest test yet. This measure is designed less to capture affective polarization than to capture a possible negative consequence of affective polarization that is detrimental to society — the level of comfort people have with those in

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8   Out-group evaluation is the Conservative party for Liberal and NDP partisans, and an average of feelings towards the Liberal party and NDP for Conservative partisans. The reverse is true for in-group evaluation. Respondents were asked how well a series of words (i.e. patriotic, intelligent, honest, open-minded, generous, hypocritical, selfish, mean) described either voters or officials from the three parties (extremely well to not well at all, 5-point scale). Positive and negative affect summed independently. Net affect was constructed by taking the difference and rescaling from -50 to 50.

out-groups in their day-to-day lives. Respondents were asked to rate their level of comfort with a member of a social group becoming their neighbour, being a close friend, and how upset they would be if a son or daughter married someone from a social group. These questions were used to construct a scale of social distance (0 to 100). It allows us to compare not just the social distance of our respondents to in-group and out-group partisans, but to other groups in society, including anglophones, francophones, Christians, Muslims and people from other races. Higher values in this case mean higher levels of alienation from the social group in question.
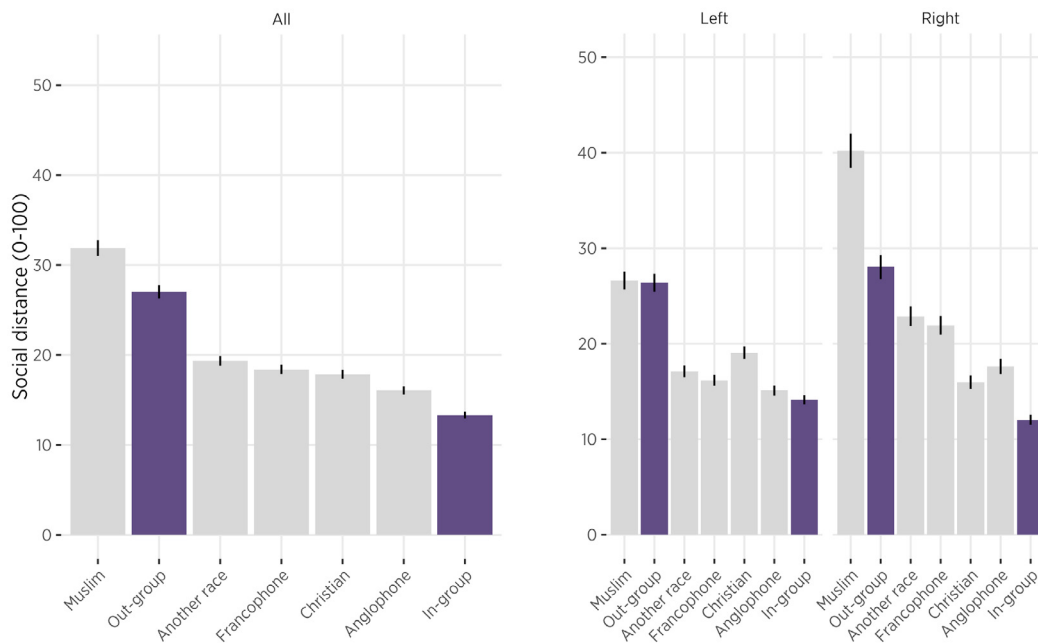

Figure 2.4.3. Social distance (0 to 100) for all partisan respondents (left panel) and left- and right-partisans (right panel)[9]

The social distance score for all partisans from out-group party supporters was 27 points, compared to 13 points for the in-group party. These results are displayed in the left panel of **Figure 2.4.3**. This is a modest 14-point gap. What is perhaps most striking is that the social distance partisans felt toward supporters of the out-group party was higher than that for all other social groups listed, except for Muslims. The results are substantively similar when broken down by partisan group in the right panel of Figure 2.4.3, though right-partisans were slightly more socially proximate to supporters of their own party.

Social distance from out-group partisans is less severe in Canada than the United States. For example, 24% of partisan Canadians expressed some discomfort with having a son or

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9   Partisans of the three major parties included. Out-group evaluation is the Conservative party for Liberal and NDP partisans, and an average of feelings towards the Liberal party and NDP for Conservative partisans. The reverse is true for in-group evaluation. Respondents were asked how comfortable they would be with a member of each group being a neighbour or close friend (very comfortable to not comfortable at all, 5-point reverse coded), and how upset they would be if a son or daughter got married to someone from each group (very upset to not at all upset, 5-point scale). These scales were summed and rescaled to run from 0 to 100 for social distance.

daughter marry an out-group partisan, compared to almost 40% of Americans in 2010. Canadians are more comparable to the U.K. on this measure of affective polarization.[10]

Finding: Canadians are affectively polarized. Partisans have substantially colder and more negative feelings about ideologically opposed parties, compared to those that are ideologically proximate. These feelings apply both to voters and party elites. Out-group partisans are also seen as more socially distant, both in comparison to in-group partisans and compared to other groups in Canadian society.

What is causing affective polarization in Canada?

There are three dominant explanations for affective polarization that may explain the situation in Canada. First, affective polarization may be the result of ideological polarization.[11] Canadians, like Americans, may be divided along ideological lines, and these divergent beliefs may result in negative feelings toward opposing parties.

We evaluated ideological polarization among Canadians in a couple of different ways with our survey respondents. First, we asked them to place themselves on a 0 to 10 scale of ideology, where 0 is left and 10 is right. Second, we gave them a battery of 15 policy questions that were coded 1 for a right-leaning response, -1 for a left-leaning response, and 0 if they didn't know or provided a neutral response.[12] A score of 15 is given to respondents who have consistently right-leaning responses, while -15 is assigned to those with consistently left-leaning responses. The left panel of **Figure 2.4.4** displays the distribution of ideological self-placement among our respondents who are partisans of the three main parties, while the right panel shows the same for ideological consistency. As is clear, these distributions show little evidence of polarization. Partisans are, on average, broadly centrist in their ideological identification. And this is true even among respondents who scored in the top third of our sample in political knowledge, as is also displayed in the figure.[13] Most Canadians are not clustered on ideological poles. They identify as moderates, and few have ideologically consistent policy beliefs.

10   Iyengar, S, Sood, G., and Lelkes, Y. 2012. Affect, not ideology: A social identity perspective on polarization. Public Opinion Quarterly, 76(3), 405–431
11   Rogowski, J.C., and Sutherland, J.L. 2016. How ideology fuels affective polarization. Political Behavior, 38, 485-508.
12   Strength of agreement (strongly agree to strongly disagree, 5-point scale) with the following statements: 1) The retirement age to receive Canada Pension Plan benefits should be raised to 70; 2) Canada should change its electoral system from "First Past the Post" to a "proportional representation" system; 3) Possession of marijuana should be a criminal offence; 4) Individuals who are terminally ill should be allowed to end their lives with the assistance of a doctor; 5) To help reduce greenhouse gas emissions, the federal government should institute a carbon tax; 6) There should be more free trade with other countries, even if it hurts some industries in Canada; 7) The federal government should support the building of oil pipelines in Canada; 8) The federal government should have more powers to combat terrorism, even if it means that citizens have to give up more privacy; 9) The government should take measures to reduce differences in income levels; 10) The Earth is getting warmer mostly because of human activity, such as burning fossil fuels; 11) Canada should increase the number of immigrants it admits each year; 12) Canada should increase the number of refugees it admits each year; How much more or less should the following groups pay in federal taxes? (Much less to much more, 5-point scale) 13) individual Canadians; 14) Corporations; and 15) Small businesses.
13   Respondents were asked a series of fact-based questions about politics, including the unemployment rate, the name of the secretary-general of the United Nations, and the relative ideological placement of the political parties. This resulted in a 0 to 4 scale. Those in the top third of this distribution were classified as high in political knowledge.
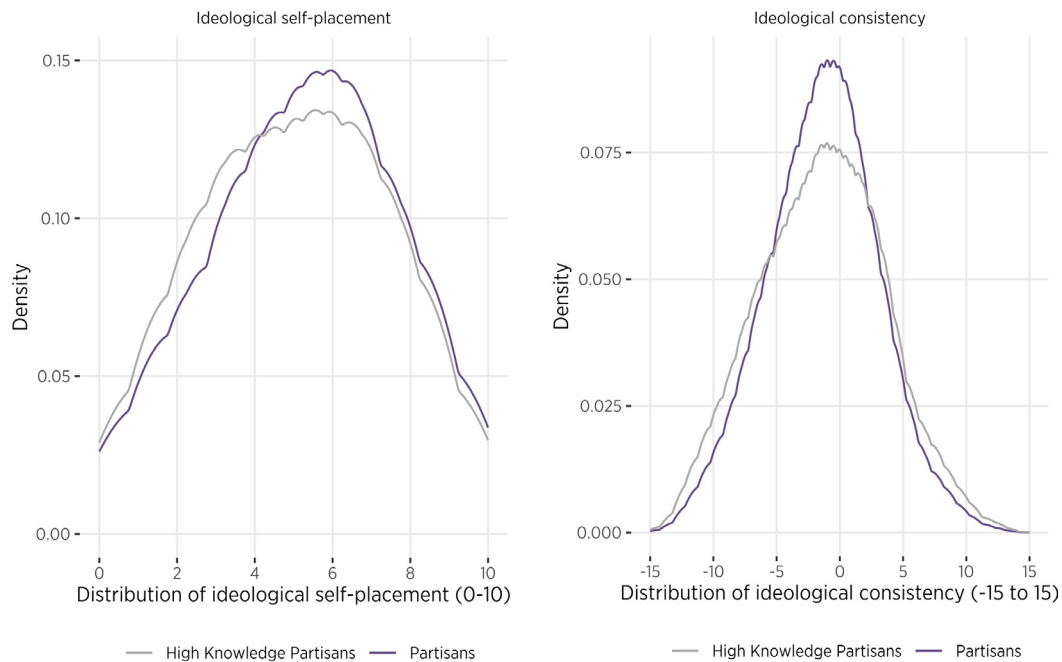
Figure 2.4.4. Distribution of ideological self-placement (left) and consistency (right).[14]

However, this does not mean ideology plays no role in driving affective polarization. It is possible that left- and right-leaning partisans have become ideologically dissimilar even if, on average, partisans are not becoming more extreme. This is known as *ideological sorting*, and recent research has found this process has occurred in Canada much like the United States.[15] We plot the ideological self-placement and consistency scores for left- and right-partisans in **Figure 2.4.5**. There is clear ideological dissimilarity between left- and right-partisans across both measures, and this is especially true among partisans who scored high in political knowledge. For example, the average self-placement score for Liberal and NDP partisans is 3.6 on the 0 to 10 left-right scale among our respondents, compared to 6.9 for Conservatives. Similarly, the average ideological consistency score for Liberal and NDP partisans is -4, compared to 2 for Conservative partisans. Interestingly, left-leaning partisans appear to be more sorted in their beliefs than their Conservative counterparts.

Finding: Canadians are not ideologically polarized. They tend to identify as moderate and hold policy beliefs that are ideologically inconsistent. That is, they hold packages of policy beliefs that are comprised of both right- and left-leaning policy positions. However, they are ideologically sorted. Right- and left-leaning partisans have distinct ideological identification and policy beliefs.

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14   Kernel density estimates. Ideological self-placement is based on a question asking respondents to indicate their place on the scale where 0 is left and 10 is right. Ideological consistency is a scale summing up respondent answers to 15 policy items coded -1 for left, 1 for right, and 0 for neutral or don't know responses. Kernel density plots show how responses are clustered across each scale. Results excluded to partisans of the three major parties. Respondents were rated as high in political knowledge if they were in the top third of the political knowledge distribution.

15   Kevins, A., and Soroka, S.N. March 2018. Growing apart? Partisan sorting in Canada, 1992–2015. Canadian Journal of Political Science, 51(1), 103-133.
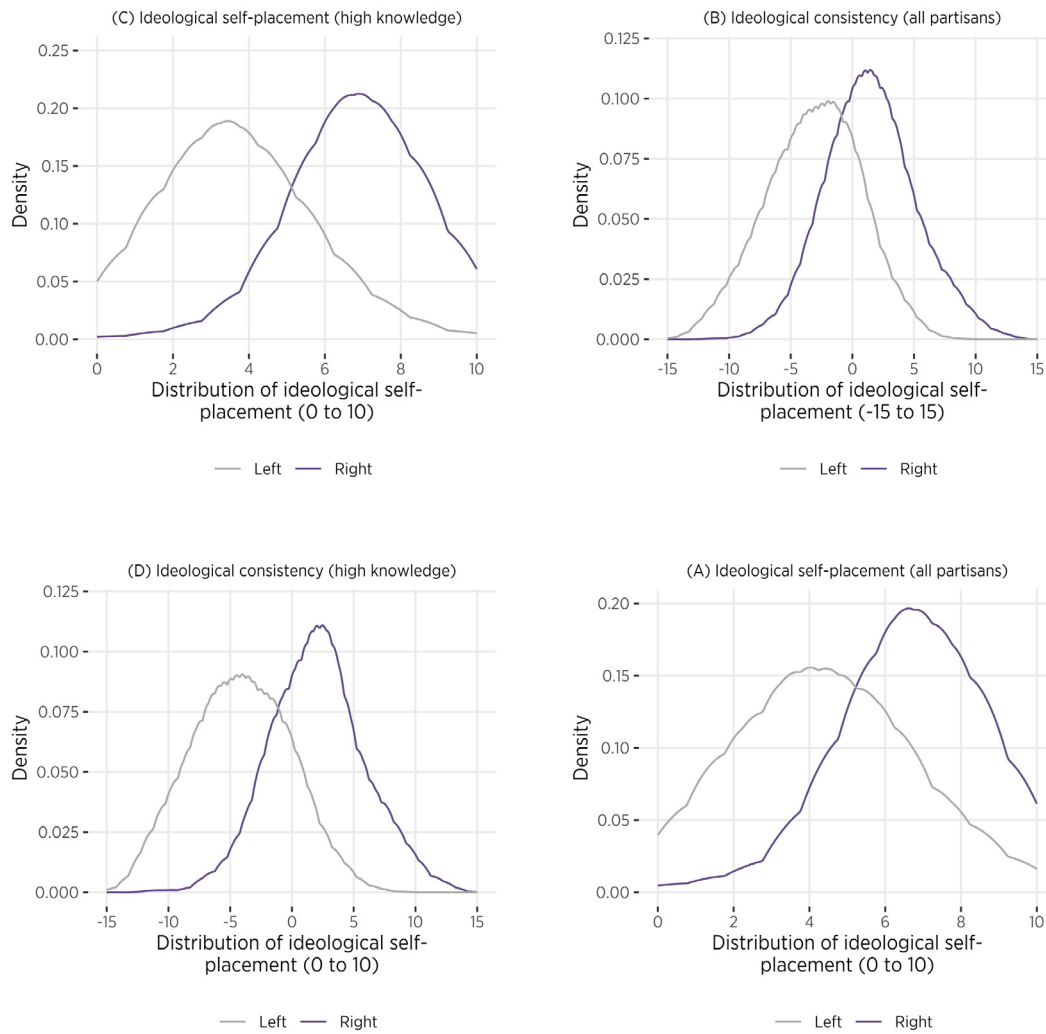
Figure 2.4.5. Distribution of ideological self-placement (left) and consistency (right) for all partisans (top) and high knowledge partisans (bottom) by partisan group.[16]

A second potential explanation for Canadians' affective polarization is that political parties may contribute to negative feelings by taking increasingly ideological stances on policy. Respondents were asked to evaluate the ideological placement of the Liberal, NDP and Conservative parties on 0 to 10 scales. The distribution of responses is shown in **Figure 2.4.6**. It is clear Canadians perceive there to be a high level of polarization. Surely some of this perceived polarization is exaggerated, but there is also some truth to it. Canadian political parties have become increasingly divided over time, and this may result in more negative feelings among opposing partisans, independent of their own ideological convictions.[17]

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16   Kernel density estimates. Ideological self-placement is based on a question asking respondents to indicate their place on the scale where 0 is left and 10 is right. Ideological consistency is a scale summing up respondent answers to 15 policy items coded -1 for left, 1 for right, and 0 for neutral or don't know responses. Kernel density plots show how responses are clustered across each scale. Results excluded to partisans of the three major parties. Respondents were rated as high in political knowledge if they were in the top third of the political knowledge distribution.

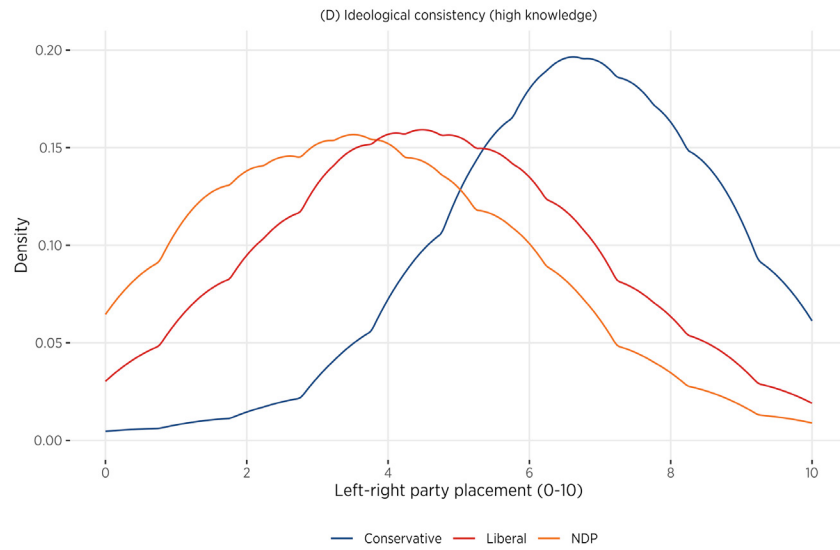17   Cochrane, C. 2015. Left and right: The small world of political ideas. McGill-Queens University Press.

(D) Ideological consistency (high knowledge)

Left-right party placement (0-10)

— Conservative — Liberal — NDP

Figure 2.4.6. Distribution of placement of parties on a 0 to 10 ideological scale.[18]

Finding: Canadians perceive there to be striking ideological polarization between the Liberals and NDP on the left, and Conservatives on the right.

Finally, some analysts have pointed to the rise of social media, and the ideological echo chambers it enables, as playing a role in polarization in the United States.[19] Although our research shows the prevalence of echo chambers and partisan media is limited in Canada, we cannot discount a role for it in generating out-group animus among the few who are regularly exposed to partisan spaces online.

Our survey does not allow us to explain the evolving patterns of affective polarization in Canada over time, but it does help explain what factors are associated with out-group animus and affective polarization at the individual level among our respondents. Based on the discussion above, we focus on three primary sets of factors:

1) ideological extremity and consistency; [20]

2) perceptions of out-group party ideological extremity; [21]

3) traditional and partisan-congenial media exposure. [22, 23]

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18   Kernel density estimates. Respondents were asked to place each party (along with themselves) on 0 to 10 scales where 0 is left and 10 is right. The kernel density plot here shows how responses are clustered on this question for each party.

19   Levendusky, M.S. 2013. Partisan media exposure and attitudes toward the opposition. Political Communication, 30(4), 565–581; Stroud, N.J. September 2010. Polarization and Partisan Selective Exposure. Journal of Communication, 60(3), 556–576.

20   Ideological extremity is measured by folding the 0 to 10 ideological self-placement scale to run from 0 to 5 with 5 being the most ideologically extreme (i.e. 0 or 10 on the original scale). Ideological consistency is similarly measured by folding the original ideological consistency scale used in Figures 2.4.4 and 2.4.5 so that 0 represents those with an equal number of left- and right-policy attitudes, while 15 indicates someone with completely consistent left- or right-issue attitudes. Out-group party ideological extremity is measured by folding the left-right party placement scales for the out-group party of the partisan respondent to run from 0 to 5 with 5 being the most ideologically extreme (i.e. 0 or 10 on the original scale).

21   Out-group party ideological extremity is measured by folding the left-right party placement scales for the out-group party of the partisan respondent to run from 0 to 5 with 5 being the most ideologically extreme (i.e. 0 or 10 on the original scale).

22   We tracked self-reported exposure to a number of different traditional news outlets and social media applications, which is described more fully in Chapter 2.1. We sum the total number of news outlets respondents were exposed to in the previous week as a continuous measure of news exposure. We identify partisan-congenial media sources as those that are selectively followed and shared by partisans on Twitter, as described in Chapter 2.5. Our measure of partisan media exposure is the share of the media diet of our respondents that is comprised of partisan-congenial sources (0 to 1).

23   We also account for other factors in this model, including political knowledge, political interest (0 to 10 scale with 10 as the highest amount of political interest), strength of partisanship (non-partisan to strong partisans, 4-point scale), partisanship (left/right/none), left-right ideological self-placement (0 to 10), education level, age, gender and region.

We estimate a model that predicts feeling thermometer scores for out-group parties, net affect toward out-group parties, and social distance from out-group parties, along with the gaps between out-group and in-group perceptions for all three. Our model predictions can be interpreted as the effect of going from the lowest score on a given variable to the highest score with all other factors held constant. This means, for example, that we can show how feeling thermometer scores are expected to change when going from the least ideologically consistent (i.e. 0) to the most (i.e. 15) for respondents with same levels of ideological extremity, strength of partisanship, news consumption, and so on. The full results are shown in **Table 2.4** in Appendix A.

The most powerful predictor of out-group affect and the gap between in-group and out-group affect in this sample is perception of out-group party ideological extremity. Partisan respondents who believe their opposing party is extreme are expected to have feeling thermometers 30 points colder, net affect scores 21 points lower, and social distance scores 10 points higher than those who believe their opposing party is moderate. As a result, the warmth gap, affect gap and difference in social distance are expected to be 40, 27 and 14 points higher than those who believe the out-group party is moderate, controlling for other factors. These are powerful effects.

Respondent ideology also matters. Ideological consistency is associated with negative feelings toward the out-group party and more affective polarization. Respondents who are perfectly consistent in their policy positions are expected to have feeling thermometer scores 18 points lower, net-affect scores 17 points lower, and social distance scores 13 points higher than those who have an equal number of right-leaning and left-leaning policy positions. In large part because of this, the warmth gap, affect gap and social distance gap are expected to be 20, 22 and 21 points higher among these respondents, controlling for other factors. Ideological extremity and strength of partisanship are also consistently associated with affective polarization, as we would expect, but the magnitude of the effects is smaller.

There is far less evidence that the information environment is having a polarizing effect on Canadians after accounting for ideology and perceptions of party extremity. Traditional news exposure is generally negatively correlated with affective polarization, while partisan-congenial media exposure is only associated with higher levels of social distance. Political knowledge and interest have similarly mixed and modest results.

Finding: Ideology and perceptions of the ideological extremity of out-group parties seem to be the dominant factors explaining affective polarization. In contrast, news exposure and even partisan news exposure are inconsistently related to affective polarization and not always in the direction we might expect.

Campaign effects?

We included our measures of affective polarization in multiple waves of our survey to see whether campaign events and rhetoric triggered increasing hostility toward out-group parties and voters. On the one hand, the massive increase in the volume of political news, along with the biting rhetoric of party leaders, may lead to higher levels of affective polarization. On the other hand, our previous analysis suggests the dominant causes of affective polarization are ideology, partisanship and perceptions of party extremity, which are unlikely to shift during a campaign. The left panel of **Figure 2.4.7** plots the average for the in-group and out-group feeling thermometers, along with the warmth gap for Waves 3, 4 and 9, while the right panel does the same for net affect.
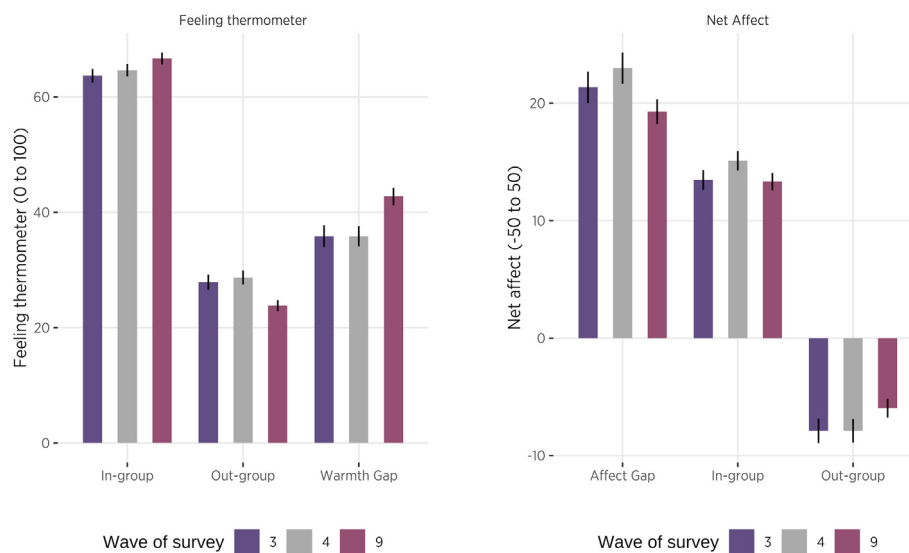

Figure 2.4.7. Affective polarization by survey wave. Left panel: average responses to questions asking respondents how much they like or dislike parties on 0 to 100 scales, where 100 is the most liked. Right panel: average net affect in regards to either voters or officials from the three parties.[24]

There appears to be no consistent change in affective polarization over the course of the campaign. The analysis of the feeling thermometers shows a slight rise in in-group feeling thermometers and drop for the out-group party, resulting in more polarization, but the effect is small. This pattern, however, is not found with net affect — if anything there is *less* affective polarization using this measure. Pundits and analysis decreed the 2019 campaign as perhaps one of the dirtiest in recent memory, but it does not appear to have meaningfully influenced how partisans feel about each other and their parties.

Finding: There is little consistent evidence that the 2019 federal election exacerbated levels of affective polarization in Canada.

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24   Partisans of the three major parties included. Out-group evaluation is the Conservative party for Liberal and NDP partisans, and an average of feelings towards the Liberal party and NDP for Conservative partisans. The reverse is true for in-group evaluation. Positive and negative affect summed independently. For net affect, respondents were asked how well a series of words (i.e. patriotic, intelligent, honest, open-minded, generous, hypocritical, selfish, mean) described either voters or officials from the three parties (extremely well to not well at all, 5-point scale). Net affect was constructed by taking the difference and rescaling from -50 to 50.

Of course, just because the 2019 election did not shift levels of affective polarization does not mean certain elements of a campaign cannot do so. Ideally, we could conduct an experiment where some people are exposed to the campaign and others are not so we could observe the difference between the groups in their levels of affective polarization.

We tried to mirror this as much as possible in the context of our survey. We collected all available Facebook advertisements that ran on the official pages of the national parties and the official pages of the party leaders in the first week of the campaign, Sept. 11 to 18, before fielding Wave 6 of our survey. We excluded ads that only asked respondents to donate or volunteer, invitations to campaign events, and a handful of ads that could not be formatted for our survey, which left us with a sample of 72 ads. We showed our respondents six randomly assigned advertisements from this sample.

Respondents were randomly assigned into three groups: one group only saw positive ads, one group saw only negative ads, and another group saw a mix of positive and negative ads. They were also given questions that measured affective polarization, as discussed previously. This allows us to examine the influence of advertising tone on affective polarization.

We expected that the tone of political advertising may play a role in driving or inhibiting affective polarization. On the one hand, negative ads contain messages that are hostile to the

" RESPONDENTS WHO WERE ONLY EXPOSED TO POSITIVE ADS FELT LESS NEGATIVELY ABOUT THE OPPOSING PARTY THAN THOSE WHO RECEIVED ONLY NEGATIVE ADS OR A MIX OF THE TWO"

interests of opposing partisans, which may breed feelings of animosity. On the other hand, positive ads tend to focus on policy rather than identity-threatening messages, so they may lower the perceived ideological distance between parties.

We find that positive ad exposure reduces negative out-group affect. That is, respondents who were only exposed to positive ads felt less negatively about the opposing party than those who received only negative ads or a mix of the two. Net affect was -11 for negative-ad recipients, compared to -8 for mixed ads, and -5 for positive ads. The difference in affect between the positive- and negative-ad groups is statistically significant ($p<0.01$), while the difference between the positive- and mixed-ad groups is marginally significant ($p \sim 0.07$). These results are plotted in the left panel of **Figure 2.4.8**.
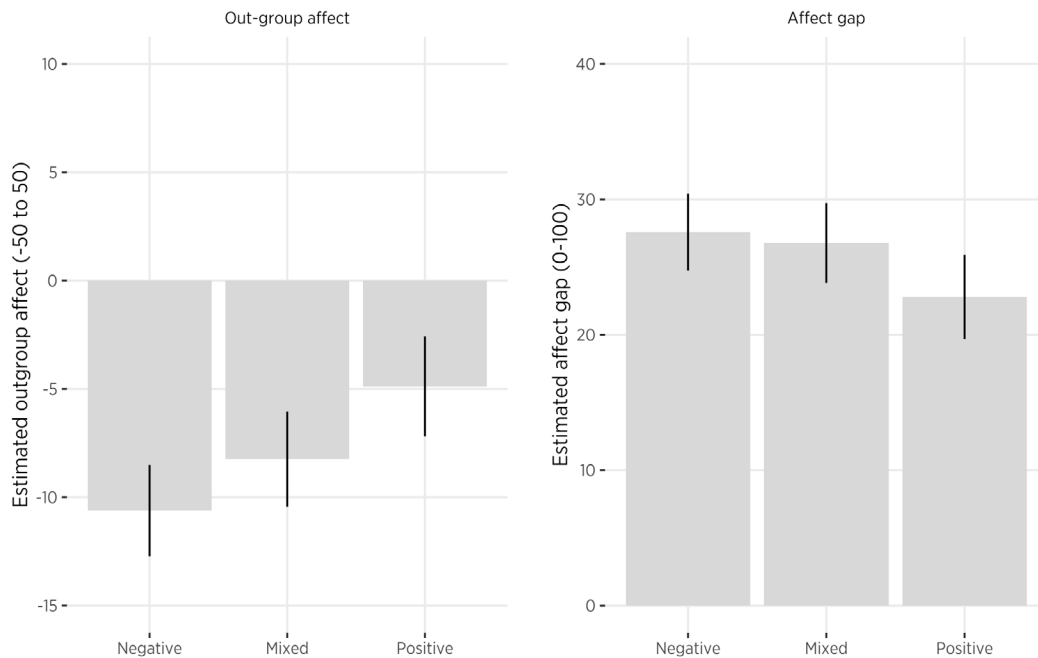
Out-group affect   Affect gap

Figure 2.4.8. Estimated out-group affect (left) and affect gap (right) across experimental conditions.[25]

Positive ad exposure, therefore, appears to reduce the affect gap — or the gap between an individual's feelings toward partisan in-groups and out-groups. This gap was 28 points for the negative-ad group and 27 points for the mixed-ad group, compared to only 23 points for the positive-ad group, all of which are statistically significant. The affect gap decreases by 15% from those who saw a mix of ads to those who saw only positive ads. These results are shown in the right panel of **Figure 2.4.8**.

Second, we wanted to see if being exposed to only positive ads would reduce affective polarization compared to being exposed to no ads at all. Here we use our party feeling thermometers. We asked these questions well before exposure to any ads at the beginning of our survey *and* after respondents saw the ads. This allows us to calculate any changes that occurred after exposure to the ads.

We find that Liberal and Conservative partisans saw each other's parties more positively after exposure to positive ads. Respondents who saw only positive ads showed a 3.5-degree increase in their feeling thermometer toward the out-group party, which is statistically significant (p<0.001). In contrast, there was no change in out-group feeling thermometers for those who saw only negative ads or a mix of positive and negative ads. These results are shown in the left panel of **Figure 2.4.9**.

25   Respondents received only negative ads in the negative condition, only positive ads in the positive condition, and a mix of both in the mixed condition. Only partisans of the Conservative and Liberal parties included. Respondents were asked how well a series of words (i.e. patriotic, intelligent, honest, open-minded, generous, hypocritical, selfish, mean) described either voters or officials from the three parties (extremely well to not well at all, 5-point scale). Positive and negative affect summed independently. Net affect was constructed by taking the difference and rescaling from -50 to 50. Includes 90% confidence intervals.
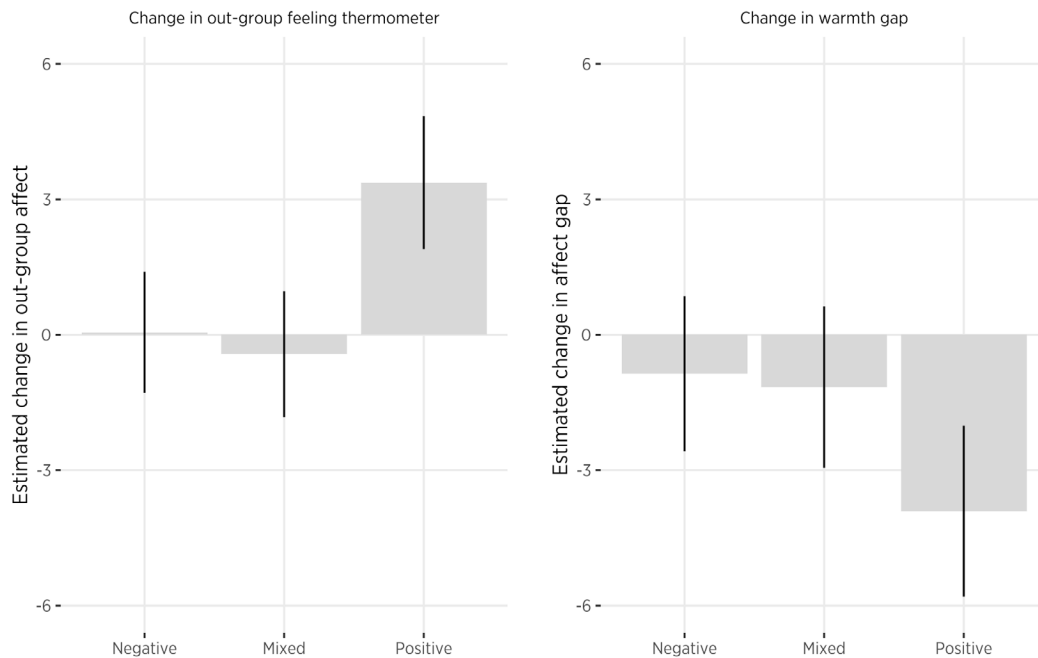
Figure 2.4.9. Estimated change in out-group feeling thermometer (left) and warmth gap (right) across experimental conditions.[26]

Positive ad exposure also appears to reduce affective polarization as measured by the warmth gap. The gap between in-group and out-group feeling thermometer evaluations was four points smaller for respondents who were exposed to only positive ads than those who saw no ads, which is statistically significant (p<0.001). This amounts to a nearly 10% decrease in the warmth gap. These results are shown in the right panel of **Figure 2.4.9**.

Finding: Positive ads appear to reduce the animus between partisans and ideologically opposing parties and their supporters. We find no evidence that negative ads used in this campaign have the opposite effect of exacerbating affective polarization.

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26   Respondents received only negative ads in the negative condition, only positive ads in the positive condition, and a mix of both in the mixed con-
      dition. Only partisans of the Conservative and Liberal parties included. Respondents were asked to rate each party on 0 to 100 scales where 100
      indicated they really liked the party and 0 signaled they really disliked the party. These questions were asked both at the beginning of the survey
      and after exposure to the ads, allowing us to calculate their change in affect. 90% confidence intervals included.

2.5 Echo chambers

The news media environment has changed considerably in the past decade and a half. The spread of the internet, and later social media, has given people greater choice in the type of news they consume, and whether or not they want to consume news at all.[1] This increased choice has the potential to be problematic when paired with the psychological tendency to engage in *confirmation bias* — the unconscious favouring of information that conforms to one's prior beliefs, which, in the realm of politics, is typically shaped by partisanship, values and social identities.[2]

Increased media choice has led to concerns among scholars and analysts that news audiences increasingly select into sources that confirm their values and beliefs.[3] In the United States, we have seen the remarkable rise of partisan-congenial news outlets designed to cater to those instincts, such as Fox News, Breitbart and RedState on the right, and MSNBC, Jacobin and Daily Kos on the left. People may increasingly choose to avoid news content from mainstream sources, and in the process cocoon themselves in an information bubble "where only certain ideas, information and beliefs are shared" — popularly known as an *echo chamber*.[4]

Online and offline, Canadians by and large prefer mainstream news sources rather than media outlets that filter the day's news through an ideological or partisan lens. However, that doesn't mean Canadians refrain from choosing news coverage that aligns with their partisan views. Both survey data and an analysis of Twitter behaviour show that while partisans may get their news from many of the same media organizations, the individual stories they engage with from those outlets may vary drastically depending on their political leanings.

News media consumption

In Chapter 2.1, we provided evidence from survey questions and media tracking data that shows mainstream news outlets dominate news consumption patterns in Canada. Here we report the prevalence of exposure to news outlets that are selectively engaged with on Twitter by partisans, which we label as partisan-congenial news outlets.[5] (See *News sources on social media* section below for more information on how these outlets were identified.) We construct a measure of partisan-congenial news exposure by summing up the total number of partisan outlets that respondents reported reading over the past week and dividing by the total number of online news outlets they read in the past week. We count it in the measure only if the outlet matches the partisanship of the respondent. Effectively, this tells us the share of a respondent's online news diet that is comprised of partisan-congenial sources.

1   Van Aelst, P., et al. 2017. Political communication in a high-choice media environment: A challenge for democracy? Annals of the International Communication Association, 41(1), 3-27.

2   Taber, C., and Lodge, M. 2006. Motivated skepticism in the evaluation of political beliefs. American Journal of Political Science, 50(3), 755-769.

3   Stroud, N.J. September 2010. Polarization and Partisan Selective Exposure. Journal of Communication, 60(3), 556–576.

4   Dubois, E., and Blank, G. 2018. The echo chamber is overstated: The moderating effect of political interest and diverse media. Information, Communication & Society, 21(5), 729-745. See also Garrett, R.K. Jan. 1, 2009. Echo chambers online? Politically motivated selective exposure among Internet news users. Journal of Computer-Mediated Communication, 14(2), 265-285.

5   On the right: Rebel News, Quillette, True North News, The Post Millennial, the Toronto Sun. On the left: National Observer, APTN Online, the Tyee, PressProgress, and Rabble.
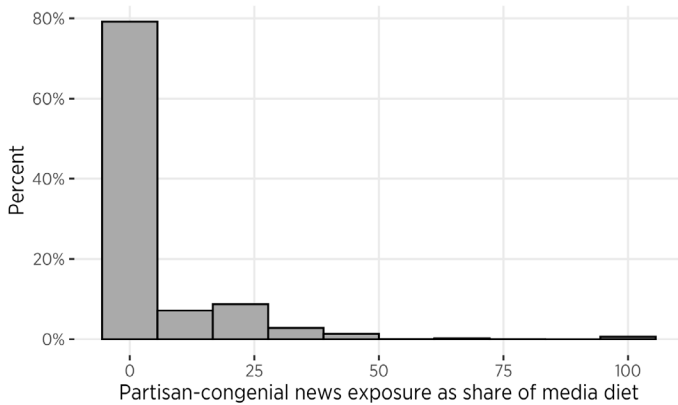
Figure 2.5.1. Share of online news media diet from partisan-congenial sources.

The distribution of this measure among our partisan respondents is shown in **Figure 2.5.1**. Overall, our partisan respondents get only 5% of their online news from partisan-congenial sources across all waves of our survey, while the median is remarkably 0. A trivial 0.1% of respondents get more than half of their online news from partisan-congenial sources.

In case our survey respondents underreported their exposure to partisan-congenial news outlets, we also evaluated this phenomenon by using our sample of respondents whose online news consumption we tracked over the course of the campaign. We calculate partisan news exposure here by dividing the total number of website visits to partisan-congenial news sources that we tracked in our su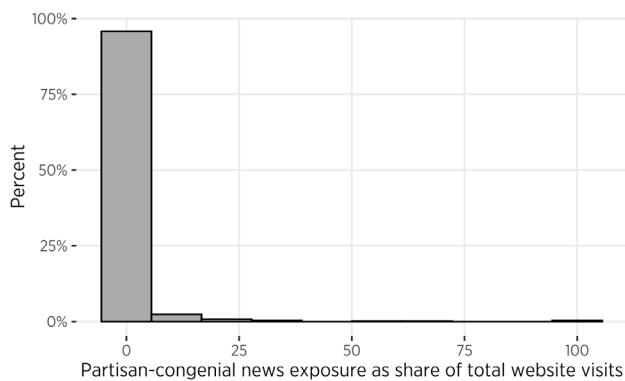rvey, either left or right, by the total number of website visits to the online news outlets we tracked. The distribution of this measure is shown in **Figure 2.5.2**.

Only 2.2% of website visits to our tracked online news outlets were to the partisan-congenial sources on average. Only 13% of respondents had any exposure at all. And this does not account for the fact that 47% of our respondents did not visit any of the news websites we tracked.

Figure 2.5.2. Share of online news media diet comprised of left or right partisan-congenial outlets as calculated through website visits.

Finding: Partisan-congenial news exposure is uncommon in Canada. Only a trivial portion of Canadians can be considered to occupy an echo chamber in their news consumption habits.

News sources on social media

Our survey and media tracking data show that news media preferences among the general public are relatively similar regardless of which party our respondents supported, even when it comes to online outlets. The impression provided by journalists and pundits, however, is that the media environment is highly fragmented, particularly on social media. It may be that online, individuals are selecting into media environments that emphasize particular issues or are themselves partisan or ideological. In this section we evaluate the extent to which this was true during the Canadian election.

To test for this, we created a sample of partisan Twitter users by looking at approximately 50,000 users who followed at least five Canadian election candidates and classifying them as "partisans" of the party that included most of the candidates they followed. We then examined the news sources with which these users engaged. We performed two tests: examining the relative likelihood that a partisan followed an outlet's official account, or a journalist from the outlet; and the relative likelihood that a partisan shared a link to content produced by the outlet. **Figure 2.5.3** shows the follower measure for 25 media outlets (selected based on a combination of popularity and variance in partisan following/sharing). The outlets have been rank-ordered based on NDP partisans' likelihood to be exposed to their content to illustrate the left-right divide.
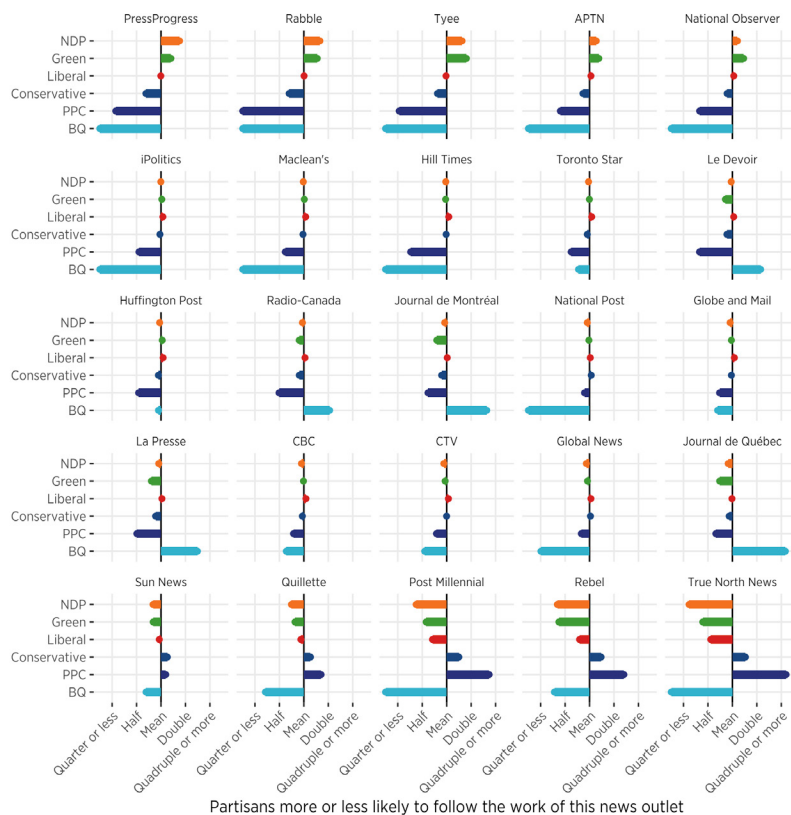

Figure 2.5.3. Consumption preferences for 25 Canadian media outlets by partisan group during the 2019 Canadian Federal Election

The five outlets that were the most followed by NDP Twitter partisans were PressProgress, Rabble.ca, The Tyee, APTN and the National Observer; while the Sun News chain, Quillette, Rebel News, The Post Millennial and True North News were the least followed. Green and NDP exposure was similar, with the major difference being that Green partisans were more likely to follow French-language publications. Liberal partisans were generally exposed to a range of outlets and were about half as likely to follow content favoured by Conservative and People's Party of Canada (PPC) partisans. Conservative and PPC partisans generally aligned directionally, with PPC partisans demonstrating more exaggerated preferences — either barely following certain outlets or much more likely to follow others. The Bloc Québécois, meanwhile, acted as expected, following almost exclusively French-language sources.

A second measure looks at the sharing of content. Being exposed to content and exposing others are politically differentiated acts and we might expect more extreme behaviour in sharing. It could be that partisan networks diffuse media more aligned with their issue emphasis or ideological positions. To get this measure, we looked at the occurrence of sharing content from the same 25 outlets by partisans from each party.

Indeed, we did find more extreme behaviour here, particularly for the publications preferred by right-leaning partisans along the bottom row in **Figure 2.5.4**. Four of these outlets were
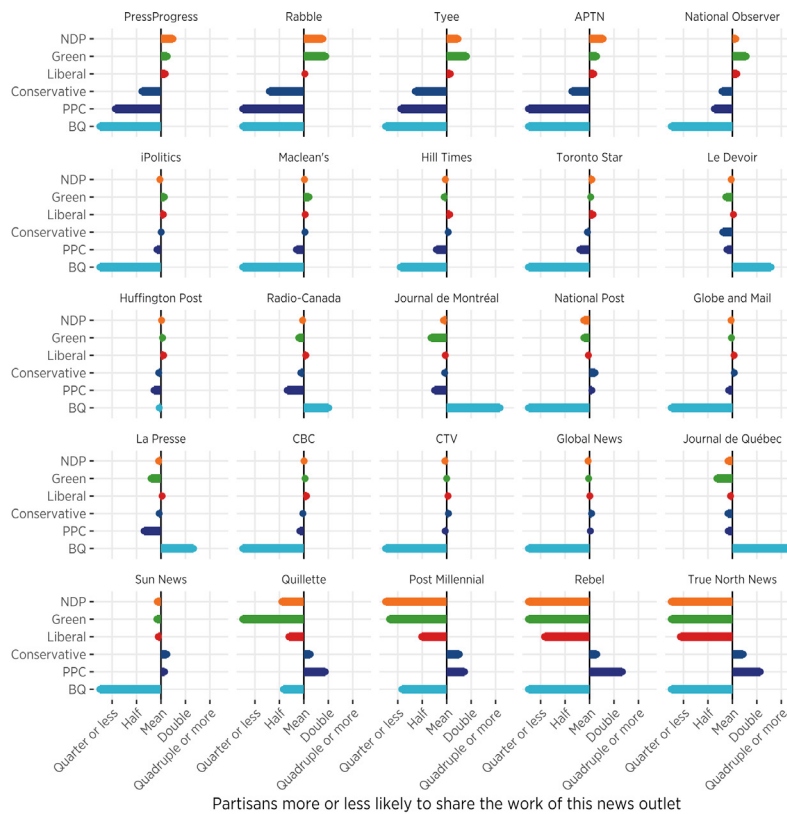

Figure 2.5.4. Sharing preferences for 25 Canadian broadcast media outlets by partisan group during the 2019 Canadian Federal Election

barely shared by any Liberal, NDP, Green or Bloc Québécois partisans, whereas they were the most shared by Conservative and PPC partisans. That behaviour was somewhat replicated for the publications preferred by left-leaning partisans along the top row, where Green and NDP partisans were far more likely to share content while Conservatives and PPC partisans barely shared any content from these sources. But again, while there was a partisan divide across a set of sources, the overall sharing landscape showed that partisans across the spectrum often shared content from the same core outlets (the 15 in the middle).

Finding: The most partisan Canadians on social media, on both the left and the right, are more likely to follow news outlets that offer partisan-congenial perspectives and are far more likely to share information by partisan-congenial sources. However, despite these preferences for a small number of partisan-congenial news sites, a large number of Canadian outlets are widely consumed and shared across partisan groups.

Predictors of partisan-congenial media exposure

For those relatively few Canadians who do seek out news from partisan-congenial sources, what factors predict their propensity to do so? Partisanship might matter. **Figure 2.5.5** shows the distribution of partisan-congenial media exposure by partisan alignment, expressed as a share of our respondents' online news diet. On average, 7% of a Conservative partisan's media diet is comprised of such sources, compared to only 3.5% for left-leaning partisans. However, correlation is not causation. Other factors may be correlated with both partisan media exposure and partisanship, which could drive these results.
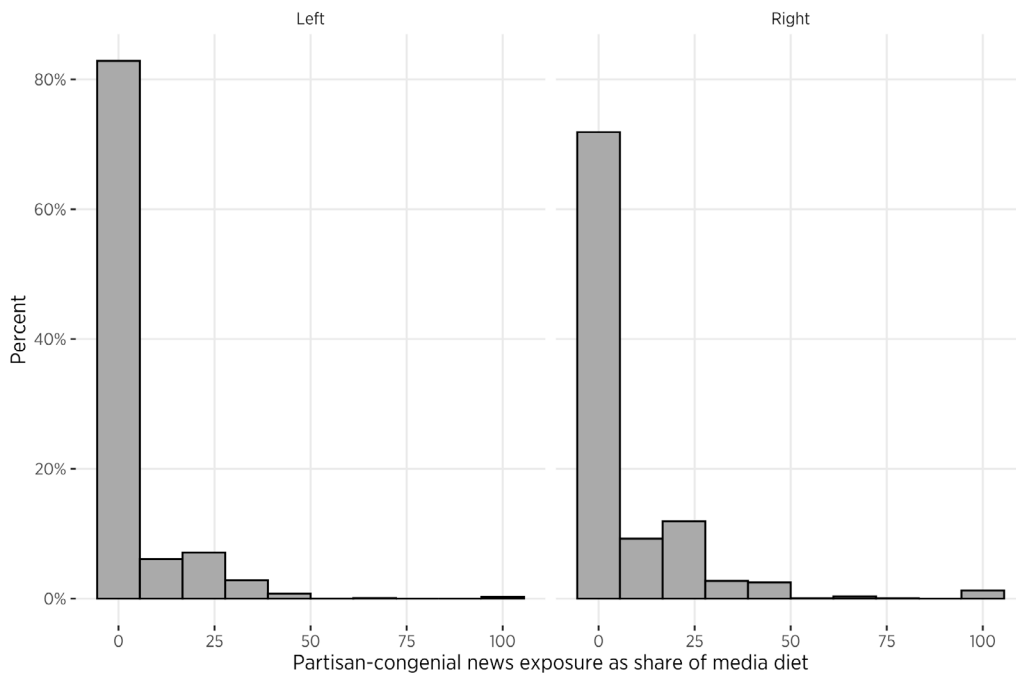

Figure 2.5.5. Share of online news media diet comprised of partisan-congenial outlets by partisanship

To address this issue, we estimated a model with regression analysis to predict the partisan-congenial media diet of our respondents.[6] This allows us to say, for instance, what we would expect the effect of partisanship to be on partisan news exposure, holding constant other factors that might matter. In other words, how different should we expect a left- and right-leaning partisan to be in their partisan-congenial news exposure when they have identical levels of political knowledge, interest, and so on? The predictions from our model are shown in full in **Table 2.5** in Appendix A.

Partisanship and ideology both matter in the expected direction. The share of online news from partisan-congenial sources is expected to be 2.4 points higher for Conservative partisans than for left-leaning partisans, and 5.7 points higher for right-wing respondents than those on the ideological left, controlling for other factors. Further, ideological extremism and partisan strength are both associated with more exposure to partisan-congenial sources. The expected share of online news from partisan-congenial sources is expected to be 2 points higher for those who are ideologically extreme than for ideological moderates, and 3 points higher for strong partisans than non-partisans.

Finally, political knowledge and interest run in opposing directions. The share of online news from partisan-congenial sources is expected to be 5 points higher for respondents with high levels of political interest compared to those with low interest, controlling for political knowledge and other factors. In contrast, the expected share of online news from partisan-congenial outlets is 3 points lower for those with high levels of political knowledge compared to those with little knowledge, controlling for political interest and other factors. All of these results are statistically significant given our very large sample, but the effects are substantively modest and must be interpreted with the baseline in mind. Very few Canadians devote attention to partisan-congenial outlets across the board.

Finding: Exposure to partisan-congenial news is associated with Conservative partisanship and right-wing ideology. It is also correlated with political interest, ideological extremity and partisan strength. Knowledge of politics, in contrast, seems to dampen one's propensity to use these sources.

Selective exposure

Canadians are not flocking to partisan-congenial news outlets in great numbers, but that does not preclude them from seeking information from other sources — including mainstream news — that support their partisan and ideological identities. This is known as *selective exposure* — or the tendency of individuals to seek out information that supports their prior beliefs and worldviews.[7] We wanted to see how people's likelihood of selecting a news story is affected by the congeniality of the news source or the content of the news article, so we conducted a conjoint experiment.

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6   Ordinary least squares regression

7   Stroud, N.J. September 2010. Polarization and Partisan Selective Exposure. Journal of Communication, 60(3), 556–576.

Conjoints are a technique used in market research to shed light on the different attributes of a product that appeal to consumers. Here we analyze the features of a news article that increase or decrease its likelihood of being selected. Our respondents were exposed to a table that described the features of two fictional news stories: news outlet of origin, headline, date and author. An example is shown in **Table 2.5.1**. They were exposed to four pairs of news articles where each element was fully randomized and had to select one story from each pair.

	Option A	Option B
Source	National Observer	National Post
Headline	Employers continue to wage discriminate against new immigrants	Professor: opponents of carbon tax don't understand basic economics
Author	Paul Simmons	Claire Scott
Date	Sept. 23	Sept. 30

Table 2.5.1. Conjoint layout example

Each news article was randomized across 14 different outlets. Respondents were exposed to articles from either the CBC, CTV, Global News, the Globe and Mail or the National Post. We call these sources *national news*. They could also receive news articles from a local newspaper, radio station or television station, which we label *local news*. Finally, they could receive articles from PressProgress, National Observer or Rabble, which we treat as *left-congenial news*, or Rebel News, Quillette or True North News, which we treat as *right-congenial news*. Using national news as the baseline for comparison, we can evaluate how much more or less likely a respondent is to select a story that is from a local, right-congenial or left-congenial source compared to national news.

We also randomized across the headline. Respondents were either exposed to headlines that were left- or right-congenial, and positive or negative in their content. We randomized the author's name so that some were male and others were female, and we randomized the date, such that some articles would be closer to the survey fielding date than others. We have no substantive interest in these latter two randomizations, but they were included to improve the realism of the task at hand.

Our results are shown in **Figure 2.5.6.** We find respondents are substantially less likely to choose left-congenial or right-congenial news sources compared to national news. They are 12 points less likely to select the former, and 11 points less likely to select the latter. They are also less likely to select local news (4 points). On average respondents were slightly more likely to select negative headlines (by 2 points), and less likely to select right-congenial headlines (by 5 points).
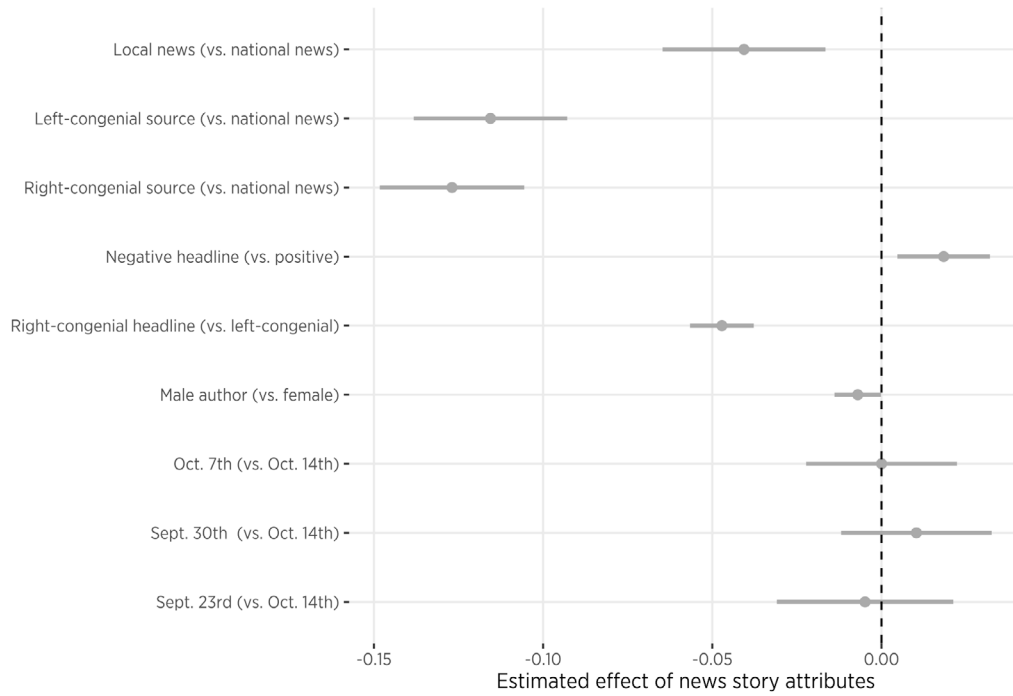
Figure 2.5.6. Estimated effects of news article attributes on likelihood of story selection
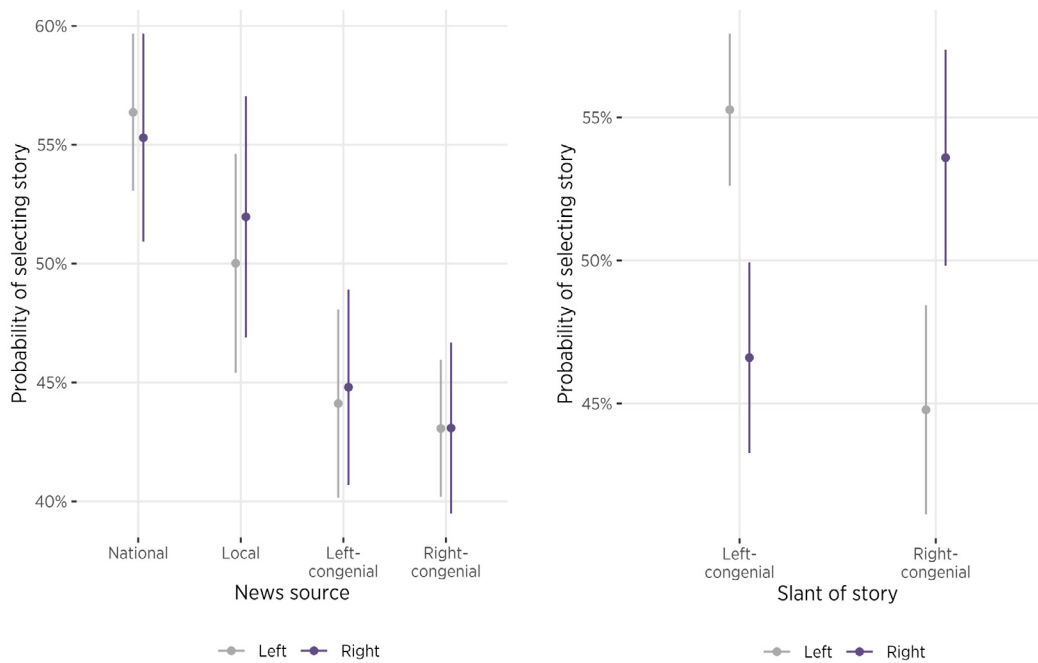

Figure 2.5.7. Probability of selecting news story with attribute by partisanship

We can also break down these results by how much they vary by partisan group. These results are shown in **Figure 2.5.7.** The left panel shows the results by type of news outlet. As is clearly evident, left- and right-leaning partisans were equally unlikely to select articles from partisan-congenial news outlets. The story changes considerably when looking at headlines. Left-partisans were expected to choose the left-congenial headline 55% of the time, compared to 47% of the time for right-partisans. Right-partisans were expected to choose the right-congenial headline 54% of the time, compared to 45% of the time for left-partisans. Respondents did not selectively expose themselves to partisan-congenial sources over mainstream sources, but they did selectively expose themselves to partisan-congenial headlines. There is remarkable symmetry between left- and right-partisans in this pattern. Partisan-congenial news may not have a strong foothold in Canada to date, but there is a market for news that supports the ideological and partisan identities of Canadians.

A second story selection experiment surveyed Twitter and Facebook users, along with a nationally representative sample. Respondents were prompted with five sets of four hypothetical headlines and asked to select the one they found interesting, important or useful. We tested across a variety of headlines about politicized (e.g. environment) and non-politicized issues (e.g. personal health) that were categorized as positive or negative for either left- or right-partisans. For example, looking at the environment topic, respondents were given the choice between the four following headlines:

- British Columbia carbon tax successfully reduced emissions (positive left)
- Huge turnout at an anti-carbon tax rally in Toronto (positive right)
- Professor: opponents of carbon tax don't understand basic economics (negative left)
- Carbon tax revenues being invested poorly, study (negative right)
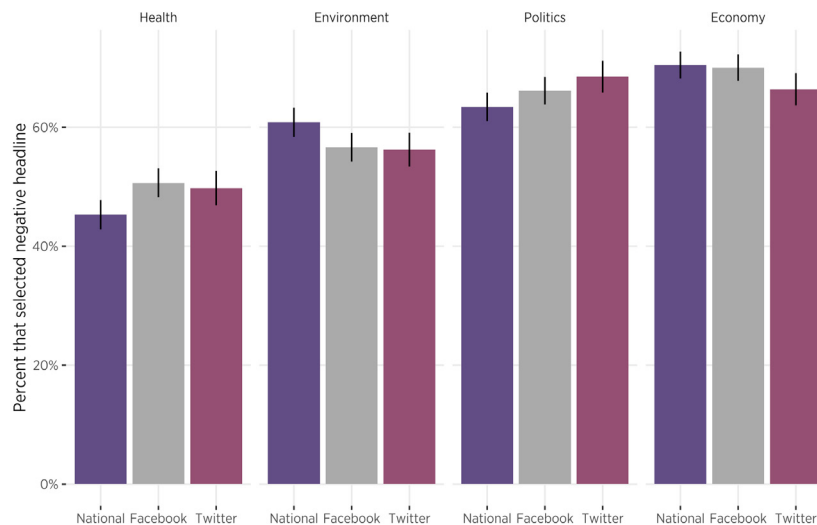

Figure 2.5.8. Selection of negative headlines across issue areas and survey source (experimental evidence)

Overall, respondents chose negative headlines about 27% more often than similar but positively constructed ones. This preference is stronger for politicized content, and holds across Facebook, Twitter and nationally representative samples. Canadians appear to prefer negative news.

Using the same experiment, we also tested the extent to which Canadians limit their information intake to coverage that conforms to their views. Focusing on the politicized content, we found large differences in the selection of headlines by partisan groups. Partisans were far more likely to select partisan-congenial headlines than those that did not reflect their worldview. For example, Liberal and NDP supporters were more likely to select "British Columbia carbon tax successfully reduced emissions," while Conservatives were more interested in "Carbon tax revenues being invested poorly, study." **Figure 2.5.9** shows these likelihoods across the national, Facebook and Twitter samples of the survey, while controlling for a variety of socio-demographic features. We find that across platforms and issues individuals are far more likely to select articles that support their worldview. We find strong effects for the national population, but this bias is even stronger for those who were active online.
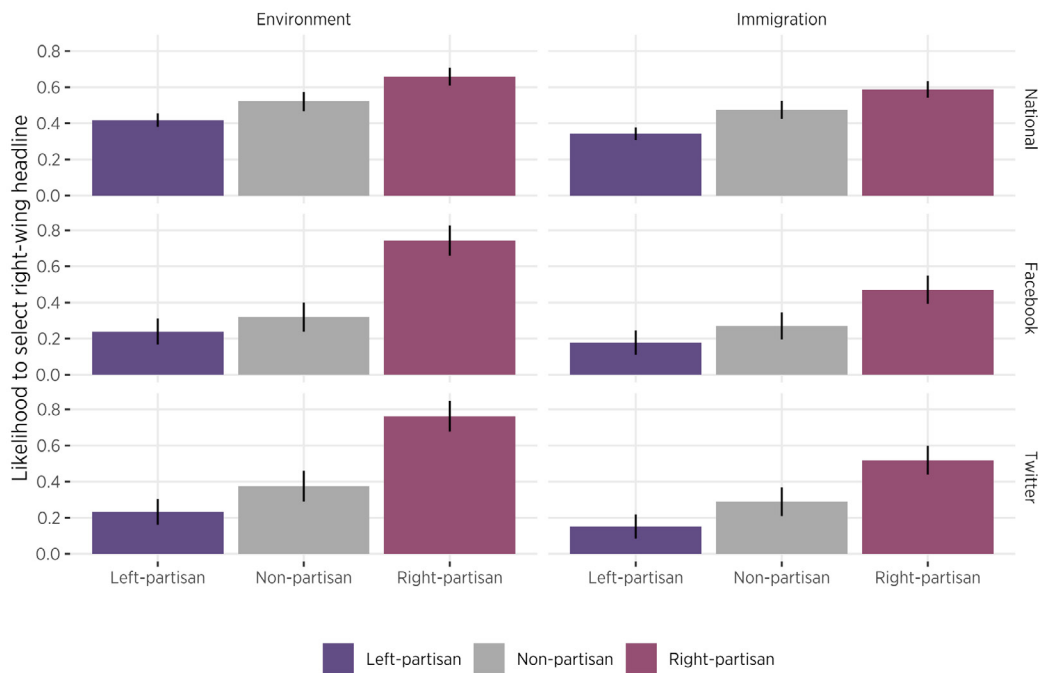

Figure 2.5.9. Likelihood to select pro-right headlines by partisan grouping across platforms and topics (controlling for age, gender, language and employment status)

Finding: Canadians do not selectively expose themselves to partisan-congenial news sources. However, they do selectively expose themselves to news content that supports their partisan and ideological identities. These effects are stronger for populations that spend a lot of time reading and discussing politics online.

Partisan behaviour on social media

Our analysis of Twitter activity during the election appears to reinforce these findings: while partisans across the board shared posts from similar media organizations, the individual stories they shared from those outlets varied drastically. We look at the top stories shared by Liberal, Conservative, NDP and Bloc Québécois partisans during the election and show the percentage of partisans from those four parties who linked to those stories. **Figure 2.5.10** shows the stark results. If users were sharing the stories they thought were the most important or significant for the campaign, we might expect to see a more even distribution of partisans tweeting the most-shared stories. Instead, the most-shared stories were in line with each party's positions, and each was shared by an overwhelming majority of supporters and disproportionately few political opponents. So, while partisans may be consuming news from similar outlets, they could still get a different picture of political events through social media.
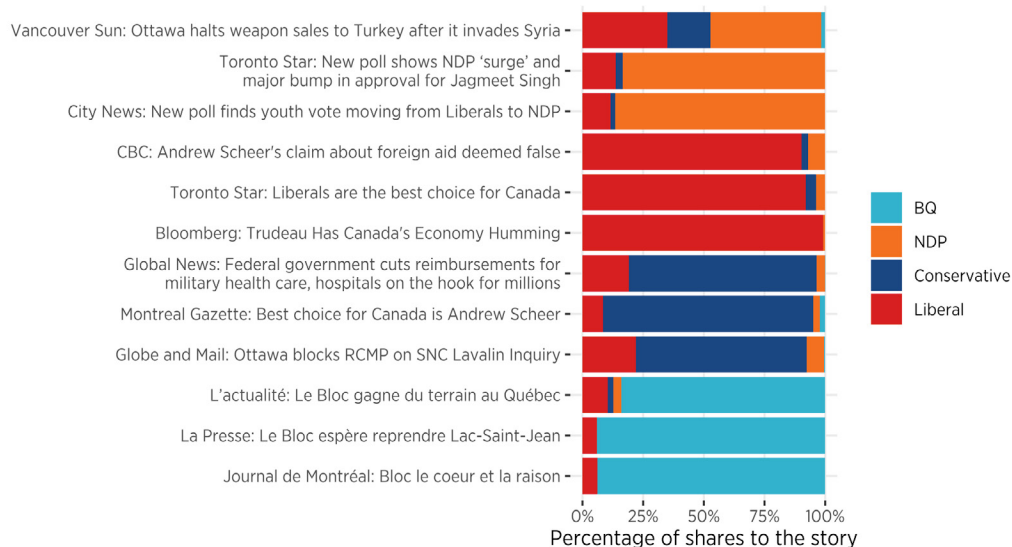

Figure 2.5.10. Top stories shared by Liberal, Conservative, NDP and BQ partisans during election

The explanation for this behaviour may lie in partisanship. Partisans have been shown to be highly responsive to partisan cues[8] and likely intensify their commitment to their political in-group during election periods. To evaluate this, we looked at partisans' following and sharing behaviour on Twitter. **Figure 2.5.11** shows the average proportion of each party's followers that followed candidates from other parties. Of all candidates followed by Liberal partisans, approximately 85% were Liberal candidates; for Conservatives, the number was around 81%. Even the Greens — the party whose Twitter supporters followed the largest percentage of other-party candidates — followed 70% Green candidates and only 30% from other parties.

8   Gaines, B.J., et al. 2007. Same facts, different interpretations: Partisan motivation and opinion on Iraq. The Journal of Politics, 69(4), 957-974; Druckman, J.N., Peterson, E., and Slothuus, R. 2013. How elite partisan polarization affects public opinion formation. American Political Science Review, 107(1), 57-79; Bankert, A., Huddy, L., and Rosema, M. 2017. Measuring partisanship as a social identity in multi-party systems. Political Behavior, 39(1), 103-132.
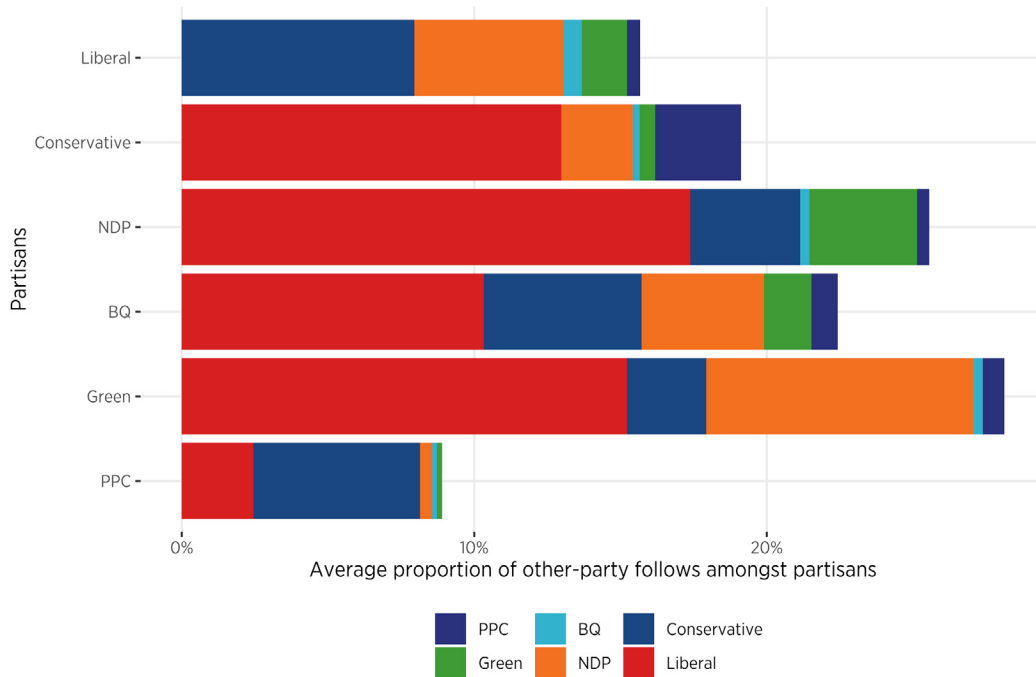
Figure 2.5.11. Percentage of other-party candidate follows for Twitter partisans during the election

We can drill deeper to measure two-party homophily, or the extent to which partisans of a given two parties are likely to follow one another. Looking at the three major national parties, **Figure 2.5.12** shows the percentage of partisans of each party that had the stated follow ratio between their preferred party and the other party featured on the plot. Following no one from the other party is categorized as a ratio of greater than 8:1. As expected, the Conservative and NDP partisans were the least likely to follow one another, with 80% of Conservatives and NDP supporters following no candidates from the other party. Liberals tended to follow more Conservative candidates than NDP candidates, although the overall number was very low.
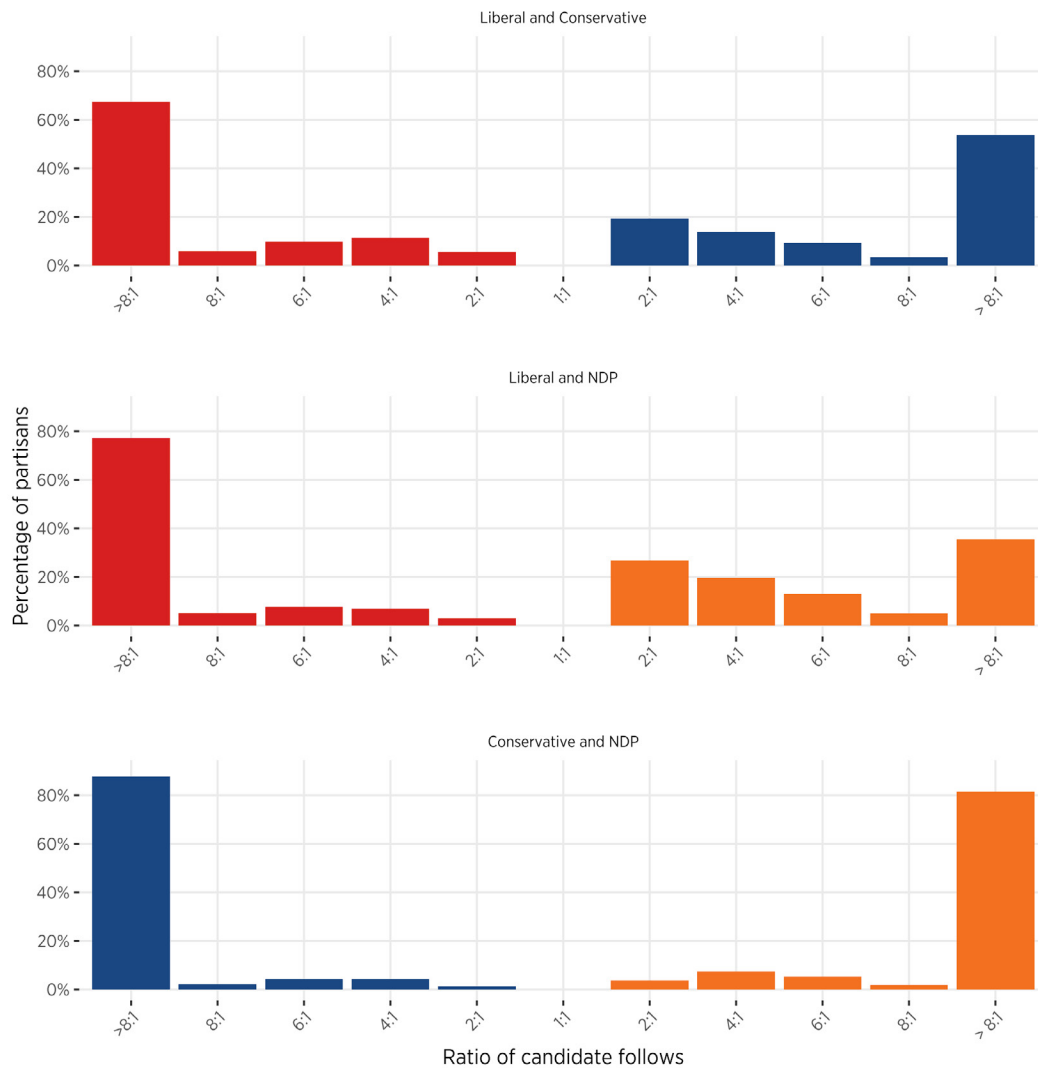
Liberal and Conservative

Liberal and NDP

Conservative and NDP

Percentage of partisans

Ratio of candidate follows

Figure 2.5.12. Ratio of candidate follows for major parties.[9]

With the vast majority of Twitter users who followed Canadian election candidates only following candidates from their preferred party, there would have been substantial differences in the information that Canadians received on Twitter.

Implications of selective exposure

One measure of the health of an information environment is the extent to which individuals receive their information only from sources that align with their perspective. Our analyses here show that, while Canadians do not select into partisan-congenial news sources, they do select into partisan-congenial media content. This is problematic in its own right. Research shows that exposure to views different than your own can moderate attitudes

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9   Bars show the percentage of partisans of a particular party who have the stated follow ratio between their preferred party and the other party featured on the plot. Following no one from the other party is categorized as greater than an 8:1 ratio.

and behaviours, while exposure to congenial perspectives can reinforce prior beliefs.[10] We wanted to see whether exposing respondents to cross-pressured or partisan-congenial messages moderated or reinforced the strength of their opinions on different issues.

We tested this in Wave 7 of our survey using an experiment focused on three important issues: immigration, the environment, and resignations of candidates who engaged in racist or other controversial behaviour in the past.

Respondents were randomly selected into one of three groups. They either received no message, a message that aligned with their self-expressed ideology (partisan-congenial), or a message that incorporated opposing views on the issue (cross-pressured). For example, on the environment, those who received the cross-pressured message read the following:

> *The Canadian population is so small relative to that of India and China that any effort we make to reduce emissions won't matter at all and may hurt our economy. On the other hand, Canada has been a major global polluter for decades and we cannot push the costs of that activity on to other countries. What should we do?*

Right- and left-partisans received messages that echoed common arguments made by their side during the election. For those on the left, the message read:

> *Canada has been a major global polluter for decades and we cannot push the costs of that activity on to other countries. We need to show some climate leadership.*

While those on the right received the following message:

> *The Canadian population is so small relative to that of India and China that any effort we make to reduce emissions won't matter at all and may hurt our economy. We need to stop trying to fix something that we can't.*

We anticipated respondents who received a cross-pressured message would express weaker opinions and intents to action. We measured these using three questions for each issue. For the environment, we asked respondents if they agreed with abolishing the carbon tax, if they supported subsidies for renewable energy, and how likely they would be to sign a petition calling for Canada to meet its Paris Accord commitments. (See Appendix B for the detailed prompts, questions and measures.)

Contrary to our expectations, we found that exposure to any argumentative messaging on a subject strengthened respondents' opinions. The partisan-congenial messaging had the strongest effect. Being exposed to only one side of an issue produced stronger opinions in both left- and right-leaning partisans. But even those who received a cross-message

10   Guess, A., and Coppock, A. 2018. Does Counter-Attitudinal Information Cause Backlash? Results from Three Large Survey Experiments. British Journal of Political Science, 1-19.; See also Bail, C.A. et al. Sept. 11, 2018. Exposure to Opposing Views on Social Media Can Increase Political Polarization. Proceedings of the National Academy of Sciences, 115(37), 9216–9221.
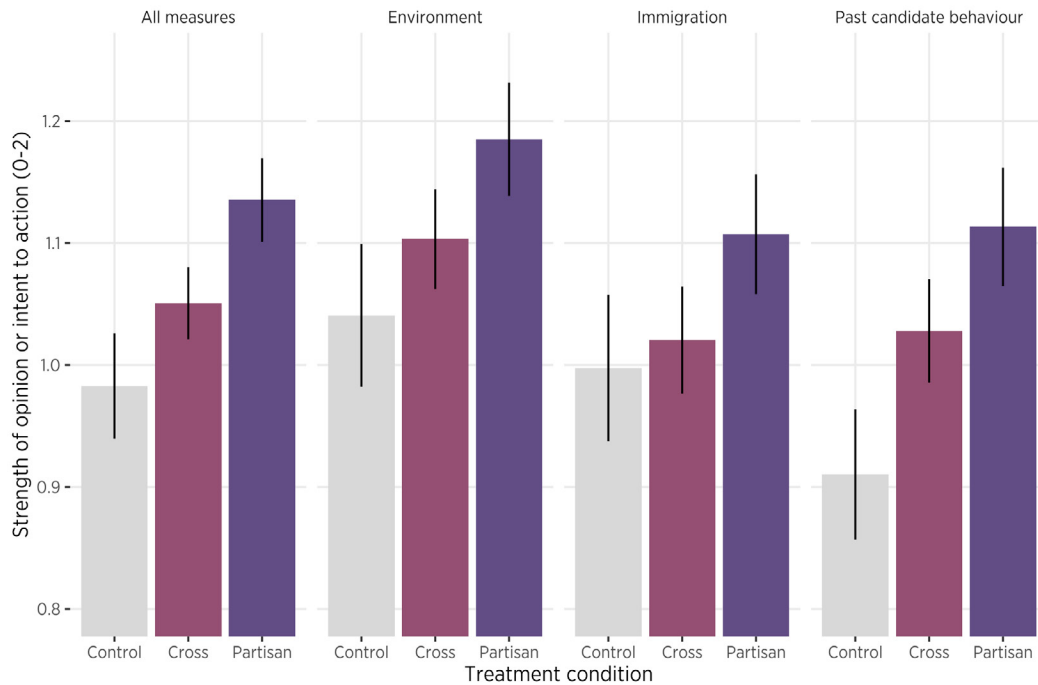
Figure 2.5.13. Effect of exposure of messaging on environment, immigration and candidate history on strength of opinion and intent to action

expressed stronger opinions than those who received no message, albeit not as strong as those who received the partisan one.

Finding: Exposure to arguments on politicized issues increases the strength of Canadians' opinions and their intentions to act. Being exposed to arguments from both sides motivates stronger opinions, but less so than exposure to partisan-congenial messaging.

2.6 Populism and Nativism

Canada has a long history of embracing immigrants and refugees, but with rising populist and nativist sentiment in the United States and Europe — and the emergence of the People's Party of Canada ahead of the 2019 federal election — politicians and analysts have been watching the topic closely. Our survey found reason to believe nativism has not yet taken hold when it comes to Canadians' opinions about immigration: the largest portion of respondents believed immigration levels should be kept the same rather than reduced. A majority rejected assertions that immigration is bad for the economy or that it increases crime in Canada. Only 21% believed immigration weakens Canada, although there is broader concern that immigrants cost taxpayers because of their use of social services (47%) and that they often fail to adopt Canadian values (54%).

There were striking partisan differences when it came to Canadians' opinions about immigration and their nationalist leanings. Conservative partisans are much more likely than their left-leaning counterparts to endorse the belief that too many immigrants are visible minorities, that immigration weakens Canada and that immigrants take jobs from native-born Canadians, though it is important to note that these are still minority positions among Conservatives. Those who identify as right-wing are also more likely to show nativist tendencies than those who identify as left-wing.

However, factual knowledge makes a difference when it comes to shaping perceptions about immigration. Providing respondents with information about the economic benefits of immigration made them more aware of those benefits, more supportive of higher levels of immigration and less nativist. The effects were particularly pronounced among Conservative partisans. This suggests nativism might not be as much of an immutable sentiment as commonly believed.

Our survey also found relatively high levels of populism in Canada. On average, respondents scored 0.60 out of 1 on our populism measure, and only 5% of all respondents scored lower than 0.33. And while much of the attention directed to populism in Canada has been focused on right-wing populism, we found a fairly even split among the three main national parties. More important than partisanship in spurring populist tendencies is economic perceptions. Respondents who believe the economy or their personal finances got worse over the past year were more likely to display populist sentiment than those who think conditions got better. We also found populism is a significant predictor of both the economic and cultural dimensions of nativism (i.e. believing immigrants hurt the economy vs. believing immigrants damage Canadian values), but more strongly for the latter than the former.

What issues do Canadians prioritize on the immigration file?

Immigration is a complex topic. It consistently ranked as one of the most important issues for our survey respondents over the course of the 2019 federal election, but Canadians may have varied considerations in mind when they think about immigration as a policy issue. Do

they care about the economic impact? Diversity and multiculturalism? Or the maintenance of "Canadian values"?

We asked respondents to choose which three of the following topics came to mind when thinking of immigration as a political issue:

- jobs and the economy
- Canadian diversity and multiculturalism
- Canadian cultural values
- social services and welfare
- refugees and asylum-seeking
- illegal immigration
- national security and terrorism
- integration (e.g. language training, settlement services)

The top dimension of immigration considered by our respondents was jobs and the economy (47%), followed closely by integration (45%), and Canadian cultural values (40%). Less important were refugees and asylum-seeking (31%), national security and terrorism (32%), and illegal immigration (32%).
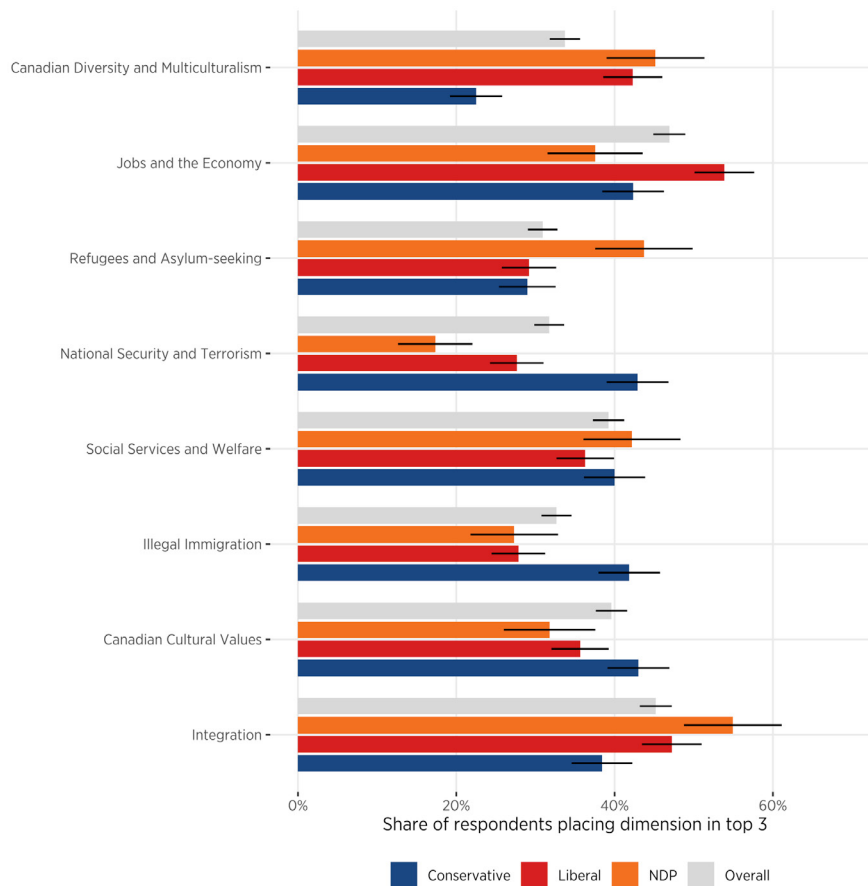

Figure 2.6.1. Share of respondents placing immigration dimension in the top three

There were striking partisan differences, however. Liberal party supporters prioritized jobs and the economy (54%), integration (47%) and multiculturalism (42%). NDP supporters focused on integration (55%), multiculturalism (45%) and refugees (44%). Conservative partisans, in stark contrast, emphasized Canadian cultural values (43%), national security and terrorism (43%) and jobs and the economy (42%). Both Conservative and Liberal partisans prioritized jobs and the economy as it relates to immigration. But there is virtually no correlation between selecting this dimension as important and one's beliefs about whether immigration is economically beneficial or costly. This suggests many see immigration as an economic opportunity. Aside from this dimension, partisans have systematically different priorities on immigration.

Finding: Aside from a common emphasis on jobs and the economy, partisans may be talking past one another to some extent on the issue of immigration. Conservative partisans prioritize cultural values, national security and illegal immigration, while Liberal and NDP partisans care much more about diversity and integration.

What do Canadians know about immigration?

Many Canadians saw immigration as an important issue for the election. But how well do they understand the policy area? In Wave 1 of our study, we asked two questions about levels of immigration or refugee intake: 1) On average, does Canada admit more or less refugees as a percentage of the population than the United States? (more/less/don't know);
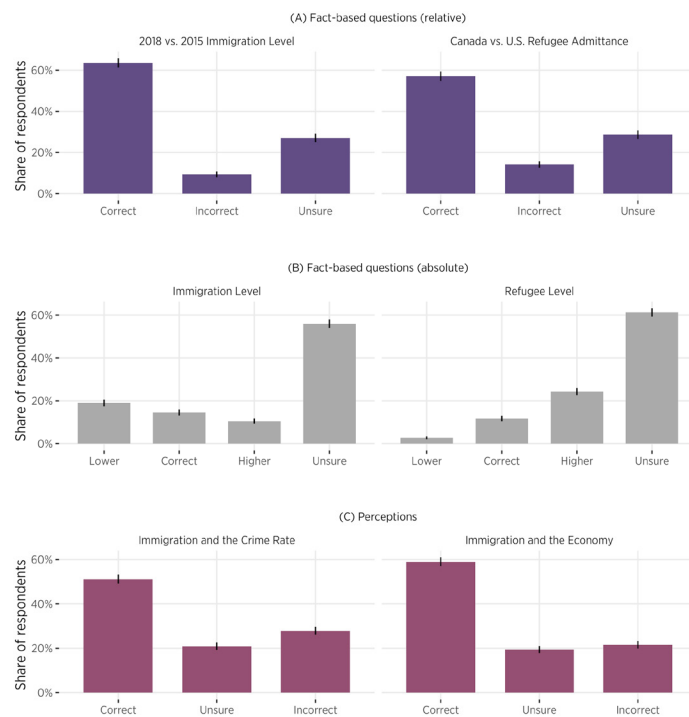
2) Is the number of all immigrants (including refugees) admitted to Canada in 2018 higher or lower than in 2015? (higher in 2015/lower in 2015/don't know). In reality, Canada admits more refugees as a share of its population than the United States, and immigration levels were higher in 2018 than in 2015.

Respondents had a reasonably solid grasp of relative levels of immigration and refugee intake. These results are shown in Row A of **Figure 2.6.2**. Fifty-seven percent correctly identified Canada as admitting more refugees as a share of its population than the U.S., compared to

Figure 2.6.2. Respondent answers to immigration knowledge questions

> **"THE NOTION THAT IMMIGRATION INCREASES CRIME OR HARMS THE ECONOMY IS ACCEPTED BY A LARGE NUMBER OF CANADIANS, BUT THEY ARE BY NO MEANS IN THE MAJORITY"**

29% who were unsure and 14% who were incorrect.[1] Similarly, 64% of respondents correctly noted immigration levels were higher in 2018 than in 2015, with only 27% unsure and 9% incorrect.[2]

However, respondents were far less knowledgeable about absolute levels of immigration and refugee intake. These results are shown in Row B of **Figure 2.6.2**. We asked Wave 4 respondents a multiple-choice question about how many immigrants the federal government was planning to admit in 2019. Fifty-six percent of respondents said they were unsure, while only 15% got the correct answer (330,000).[3] Similarly, 61% of respondents were unsure of the current intake of refugees, with only 12% getting it right (28,000).[4] The direction of misinformation is clearly in one direction here: 24% of respondents believed refugee intake is higher than in reality, while only 3% thought it was lower.

The above questions measured factual knowledge about immigration levels that may inform opinions about immigration. In addition, respondents may harbour misperceptions about immigrants that may also influence their support for immigration. Two common misperceptions are that immigrants are associated with crime and are a net economic cost to Canadian society. We asked respondents whether they believe immigration increases crime in Canada (it does not),[5] and whether they believed immigration was bad for the economy (it is not).[6] Most of our respondents rejected these propositions: 59% correctly indicated they did not believe immigration was bad for the economy, with 19% unsure and 22% incorrectly supporting the statement. Similarly, 51% disagreed that immigration increases crime in Canada, with 21% unsure and 28% believing the affirmative. The notion that immigration increases crime or harms the economy is accepted by a large number of Canadians, but they are by no means in the majority. These results are shown in Row C of **Figure 2.6.2**.

Finding: Canadians have low levels of knowledge about absolute levels of immigration and refugee intake, but they are able to make comparisons about levels over time and between Canada and countries such as the U.S. Only a small minority of Canadians harbour misperceptions about the relationship between immigration and the economy and crime.

What determines knowledge about immigration?
Our data can allow us to estimate which factors are associated with more accurate information on the issue of immigration and which are associated with more misinformation.

1   Markusoff, J. Jan. 23, 2019. Canada now brings in more refugees than the U.S. Maclean's.
2   Statistics Canada. Table 17-10-0008-01. Estimates of the components of demographic growth, annual. Government of Canada.
3   Immigration, Refugees and Citizenship Canada. Oct. 31, 2018. Notice – Supplementary Information 2019-2021 Immigration Levels Plan. Government of Canada.
4   Markusoff, J. Jan. 23, 2019. Canada now brings in more refugees than the U.S. Maclean's.
5   Zhang, H. April 2014. Immigration and Crime: Evidence from Canada. Canadian Labour Market and Skills Researcher Network, Working Paper No. 135.
6   The Conference Board of Canada. May 15, 2018. Imagining Canada's Economy Without Immigration.

Here we estimate models using regression analysis that predict the total number of correct, incorrect and net-correct (i.e. correct less incorrect) answers on our immigration questions in Wave 1 and Wave 4 of our survey.[7] The results of these models show the effect of each variable holding constant all other factors in the model. For example, it will tell us the estimated effect of increasing levels of political knowledge on the accuracy of responses for respondents with the same levels of political interest, news exposure, partisanship, and so on. Full results are in **Table 2.6.1**.

	Relative (Wave 1)			Absolute (Wave 4)			Perceptions (Wave 4)		
	Correct	Incorrect	Net	Correct	Incorrect	Net	Correct	Incorrect	Net
Knowledge (High-Low)	0.42***	-0.16**	0.58***	0.22***	0.13	0.09	0.22**	-0.16*	0.38**
Political Interest (High-Low)	-0.01	-0.03	0.01	0.23***	0.01	0.22	0.43***	-0.28***	0.71**
News Exposure (High-Low)	0.11	0.41***	-0.31**	0.20**	0.63***	-0.43***	-0.02	0.18*	-0.15
MIP (Yes-No)	0.22**	-0.01	0.23*	0.04	0.23***	-0.19*	-0.44***	0.43***	-0.87***
Partisanship (Right-Left)	0.04	0.00	0.04	0.11**	0.03	0.09	-0.29***	0.21***	-0.51***
Ideology (Right-Left)	0.24*	-0.07	0.32*	-0.04	0.05	-0.08	-0.48***	0.35***	-0.82***
Immigration Knowledge (High-Low)							0.03	-0.25***	0.28*

Table 2.6.1 Predicted effects on the number of correct and incorrect responses

Note: MIP = Most Important Issue; Model also controlling for gender, education, age, and region. Statistically significant differences indicated with *p<0.1, **p<0.05, ***p<0.01.

We find, unsurprisingly, that political knowledge is associated with more correct answers, fewer incorrect answers, and thus more net-correct answers for our relative questions, though this pattern is not quite significant for the absolute questions. For the absolute questions, political interest appears to be a better predictor of correct and net-correct responses. Partisanship and ideology are only weakly and inconsistently correlated for both types of questions. And, reflecting our findings from Chapter 2.2, traditional news exposure is more strongly associated with incorrect than correct responses on immigration. As a result, respondents with high traditional news exposure are less likely to be accurately informed on immigration compared to those with low levels of news exposure.

When it comes to perceptions of the relationship between immigration and the economy
7 Full results are in separate tables.

or crime rates, partisanship, ideology and prioritizing immigration are all strongly associated with fewer correct responses and more incorrect responses, whereas political interest and knowledge have the opposite effect. There is even more evidence that information matters in shaping these perceptions. Respondents with higher net-correct responses on our absolute fact-based questions endorsed fewer misperceptions than those with less factual immigration knowledge. Although partisanship and ideology dominate, knowledge and facts do seem to matter in shaping misperceptions about immigration — a point that will be returned to below.

Finding: News exposure is associated with both correct and incorrect answers on immigration fact-based questions, such that respondents with high levels of news consumption are more net-misinformed about immigration. Political knowledge is strongly associated with better performance on fact-based questions, while right-leaning partisanship and ideology is associated with immigration misperceptions. Fact-based knowledge of immigration also appears to be negatively associated with endorsing these misperceptions.

Nativism in Canada

The rise of the far right in the United States and Europe, coinciding with the increased movement of displaced peoples, has put a renewed focus on nativism in Canada. Nativism can be defined as policies or attitudes that privilege native-born inhabitants over immigrants. This broad definition of nativism does not, however, specify the beliefs at the root of nativist sentiment. For instance, nativists may think (incorrectly) that immigrants impose fiscal or economic costs on society, or they may subscribe to cultural chauvinism, where they are hostile to the cultural beliefs and practices that immigrants bring with them to Canada. And, of course, nativism may partially be rooted in white nationalist beliefs. These components of nativism may be largely independent of each other or they may "hang together" in some fashion. For example, people who believe immigrants are a threat to the jobs of native-born citizens may also have bigoted views.

We asked respondents a variety of questions that tapped into possible dimensions of nativism.[8] There is relatively limited support for the view that immigration weakens Canada, though 21% is still a remarkably high number. The same is true for the notion that too many visible minorities are being admitted to Canada (29%). There is also relatively little support for the belief that immigrants take jobs from native-born Canadians (27%), though more people believe employers should prioritize the hiring of native-born Canadians (44%). In contrast, there is widespread concern that immigration costs taxpayers because of their use of social services (47%) and that immigrants often fail to adopt Canadian values (54%).

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8   1) Too many immigrants are visible minorities; 2) Canada would be stronger if immigration was stopped; 3) Immigrants often fail to adopt Canadian values; 4) Immigrants cost taxpayers through use of social services; 5) Immigrants take jobs from native-born Canadians; 6) When jobs are scarce, employers should prioritize hiring people of this country over immigrants (strongly agree to strongly disagree, 5-point scale)
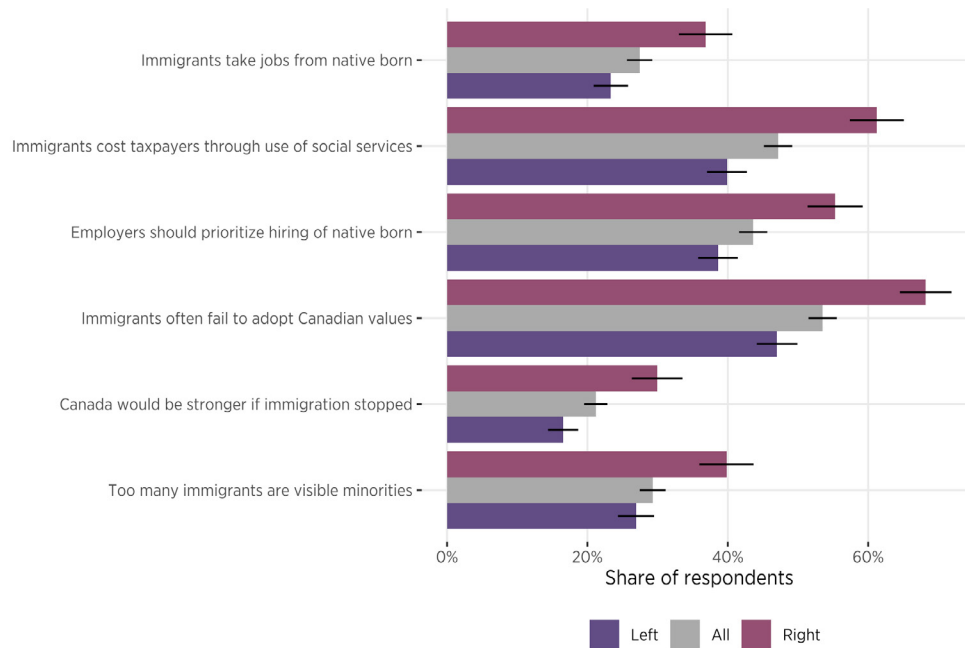
Figure 2.6.3. Percent of respondents supporting position on immigration

As with our analysis on the dimensions of immigration that respondents prioritize, there are striking partisan differences. Conservative partisans are much more likely than their left-leaning counterparts to endorse the belief that too many immigrants are visible minorities (40 vs. 27%), that immigration weakens Canada (30 vs. 16%), and that immigrants take jobs from native-born Canadians (37 vs. 23%), though it is important to note that these are still minority positions among Conservatives. A majority of Conservative partisans, however, believe employers should prioritize native-born Canadians (55%), see immigrants as a cost to taxpayers (61%), and perceive immigrants as failing to adopt Canadian values (68%), all at much higher levels than left-leaning partisans (38, 40 and 47%, respectively). These results are displayed in **Figure 2.6.3**.

We conducted an exploratory factor analysis to identify possible dimensions of nativism with our six questions. This analysis identified two dimensions running through our nativist questions, one centred primarily on our economic-focused questions (i.e. jobs, hiring), and another centred on the cultural questions (i.e. ethnic makeup of new immigrants, cultural values). The cost to taxpayers is associated with both dimensions but, interestingly, more with the latter dimension than the former. We rescaled each dimension from 0 to 1, where 1 indicates the highest possible level of nativism. These two dimensions of nativism are modestly correlated (0.38 out of 1). The left panel of **Figure 2.6.4** shows the distribution of each nativist dimension among our respondents. The economic dimension of nativism is a minority proposition (0.44), but the same cannot be said about the cultural dimension of nativism (0.57). The centre and right panels of **Figure 2.6.4** illustrate how the distribution varies by partisanship. Right-leaning partisans are more nativist across both dimensions, but there is substantial overlap.
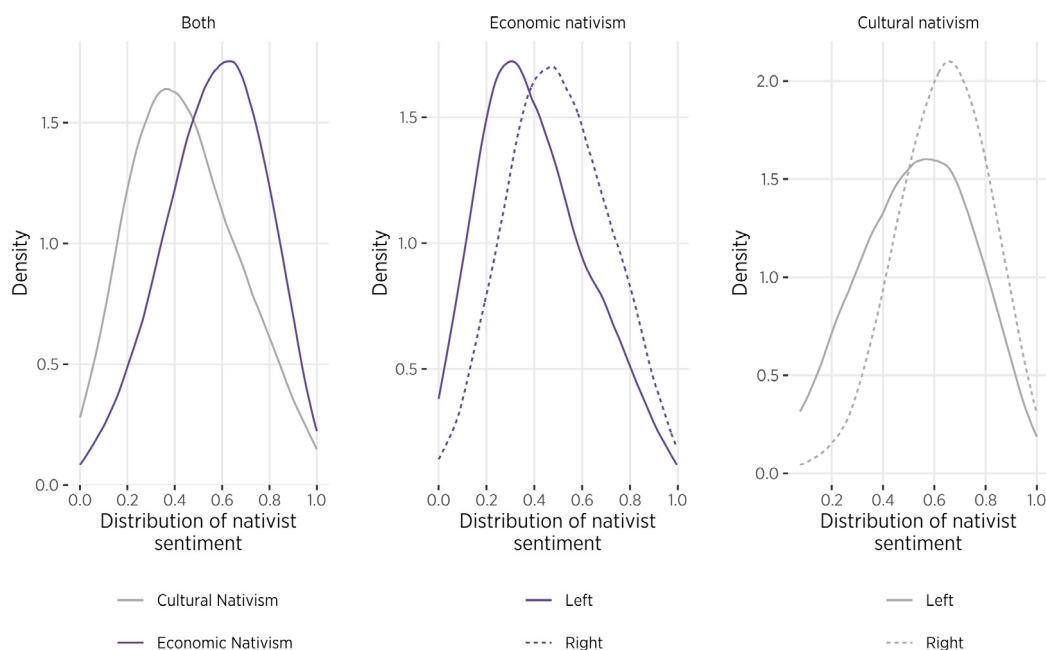
Figure 2.6.4. Distribution of economic and cultural nativism[9]

We can evaluate how strongly each dimension of nativism is associated with support for decreasing immigration in Canada. Respondents were asked whether they believed immigration in Canada should be increased, decreased or kept the same. A large plurality of respondents believed immigration levels should be kept the same (46%), while those supporting a decrease were much more numerous than those wanting an increase (36 vs. 18%).

We used regression analysis to estimate the effect of each dimension of nativism on support for reducing immigration, holding constant other factors that might be associated with nativism and support for decreased immigration.[10] We find that there is a statistically significant association between support for decreased levels of immigration and both our economic and cultural dimensions of nativism.[11] There was no significant difference between the effects of either dimension of nativism on support for decreased immigration — both equally predict support for decreased immigration.[12] The magnitude of the effects are sizable. We can generate predictions for respondents with different levels of nativism. We would expect only 6% of respondents with the lowest level of economic nativism to support lower levels of immigration compared to 81% of respondents with the highest level of economic nativism. The equivalent numbers for cultural nativism are 3 and 73%.

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9   Dimensions generated through predictions from an exploratory factor analysis
10   Ordered logistic regression. Here we control for net levels of knowledge on immigration, as introduced earlier, general political knowledge, political interest, news exposure, partisanship, ideology, strength of partisanship, ideological extremity, negative economic perceptions, negative perceptions of personal finances, gender, education, age, and region.
11   p<0.001 for each
12   p–0.62

Populism in Canada

Respondents can also shed light on the scale and scope of populism in Canada — defined as an ideology that promotes the interests of "the people," imagined as a collective, in opposition to elites. We asked respondents a series of questions designed to tap into populist sentiment and constructed an index of these questions ranging from 0 to 1, where 1 is having the maximum possible populist sentiment.[13] On average, respondents score 0.60 on the 0 to 1 scale. Only 5% of all respondents score lower than 0.33.
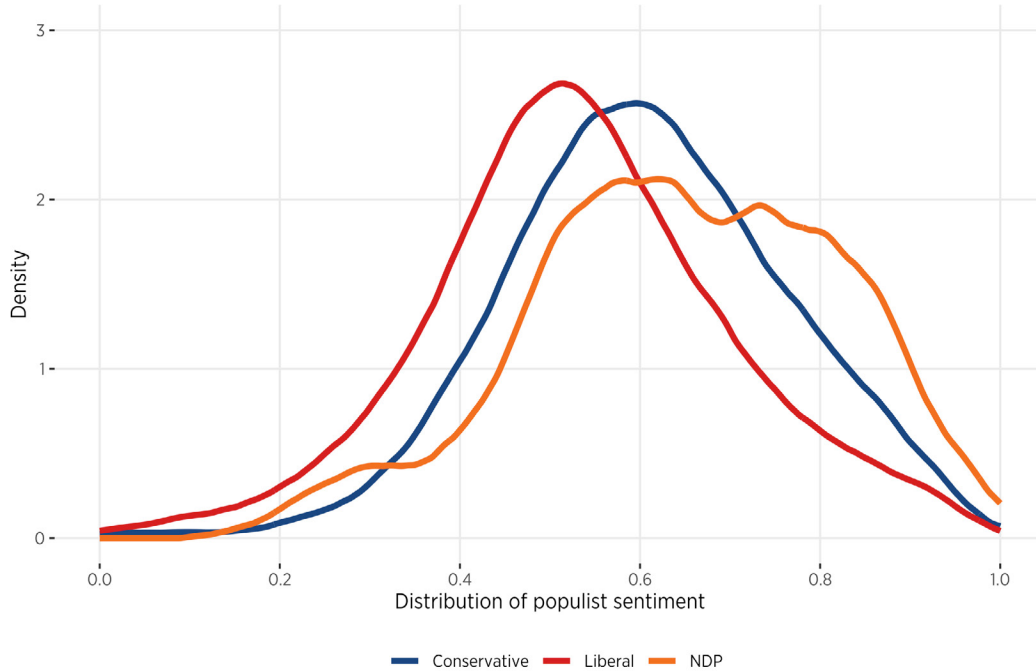

Figure 2.6.5. Distribution of populist sentiment by partisan group

Much of the attention directed to populism in Canada has been focused on right-wing populism. However, populist sentiment does not break down along partisan lines the way we might expect. The kernel density plot in Figure 2.6.5 shows the distributions of populism by partisan group. Populist sentiment is most common among NDP partisans (0.65) and least common among Liberals (0.53), with Conservatives falling somewhere in between (0.61).

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13   Respondents were asked to respond to the following seven statements on a 5-point (strongly agree to strongly disagree) scale: 1) The Canadian economy is rigged to advantage the rich and powerful; 2) Traditional parties and politicians don't care about people like me; 3) Experts in this country don't understand the lives of people like me; 4) To fix Canada, we need a strong leader willing to break the rules; 5) Canada needs a strong leader to take the country back from the rich and powerful; 6) Politicians should be able to say what's on their minds regardless of what anyone else thinks about their views; 7) I trust the government to do the right thing. We used the resulting first dimension identified from a principal components analysis.

Determinants of populism in Canada

Our data allowed us to more clearly identify factors that are linked to populism while holding other factors constant. We estimated a linear regression model to predict the populist sentiment of respondents, which has been rescaled from 0 to 100, where 100 indicates a maximum level of populist sentiment. This allows us to say, for example, what the estimated effect of partisan alignment is on respondents' reported levels of populism, if they are otherwise identical in their political knowledge, political interest, news exposure and so on. Full results are provided in **Table 2.6.2** in Appendix A. We find there is no clear relationship between partisanship or ideology and populism, as hinted at in our kernel density estimates. Rather, populist sentiment is 7 points lower among strong partisans compared to non-partisans, and 5 points higher among those who report themselves as ideologically extreme (i.e. 0 or 10 on the 0 to 10 ideological self-placement scale) rather than moderate (i.e. 5), holding all else constant. Populists tend to be those with strongly held ideological beliefs, but who are repelled by Canadian political parties.

Even more important are economic evaluations. Respondents who believed the economy and their personal finances got worse over the past year scored 13 and 7 points higher in populist sentiment, respectively, than those who thought conditions got better, holding all else constant. Sour personal and national economic evaluations appear to be strongly associated with populism.

Finally, it appears that populists are slightly less engaged than non-populists. Respondents with high levels of political news exposure are estimated to have levels of populist sentiment 6 points lower than those who report no political news exposure over the past week. We have to be careful about interpreting the causal direction here — populist sentiment may make people less inclined to read political news, rather than news exposure making people less inclined to populism. Irrespective of this caveat, there is little evidence that traditional or partisan news is associated with higher levels of populist sentiment.

Finding: Populism in Canada is strongly predicted by negative perceptions of the economy and the personal finances of the respondent. There is no clear relationship between partisanship and populism. Populists tend to be those with ideologically extreme beliefs but who are repelled by the major parties.

Determinants of nativism in Canada

We can conduct a similar analysis to estimate the effect of populism on economic and cultural nativism. The full results of our analysis are displayed in **Table 2.6.3** in Appendix A. We find that populism is a significant predictor of both the economic and cultural dimensions of nativism, but more strongly for the latter than the former. Respondents with the highest levels of populist sentiment (i.e. scored 1 on the 0 to 1 scale) are estimated to have economic and cultural nativist scores 8 and 19 points higher, respectively, than those who scored the lowest on these dimensions (i.e. 0), controlling for all other factors.

Besides populism, ideology and partisanship have the strongest effects on nativism. Those who identify as right-wing (i.e. scoring 10 on the 0 to 10 self-placement) have economic and cultural nativism scores 10 and 15 points higher, respectively, than those who identify as left-wing (i.e. scoring 0). Additionally, right-wing partisans have economic and cultural nativism scores that are each 4 points higher than left-wing partisans' scores. Once again, economic evaluations seem to matter, but only for one's evaluation of the state of the economy rather than their personal finances. Respondents who believed the economy worsened over the past year scored 5 and 6 points higher in their economic and cultural nativism, respectively, than those who felt the economy improved.

There also seem to be some information effects, but they are inconsistent. Factual knowledge of immigration and general political knowledge are both associated with lower levels of economic nativism. Respondents with higher levels of immigration knowledge scored 4 points lower in their economic nativism than those with lower levels of such knowledge, while those with high levels of general political knowledge scored 8 points lower than those with low levels of general political knowledge. Political interest is also associated with lower levels of cultural nativism. Respondents who scored the highest in general political interest (i.e. 10 on the 0 to 10 scale) are estimated to have cultural nativism scores 9 points lower than those with the lowest political interest (i.e. 0).

Finding: Populism and ideology together are the dominant drivers of nativist sentiment, whether such sentiment is motivated by cultural or economic concerns. Economic evaluations and knowledge also seem to play a role, if more modestly and inconsistently.

Effects of economic information on opposition to immigration and nativism

One key finding that emerges from the above results is that economic nativism is an important dimension of broader nativist sentiment. That is, a sizable segment of the Canadian public sees immigrants as a threat to the jobs of native-born Canadians and costly to the Canadian economy. As a result, people's perceptions of how well the economy has been doing is an important factor in explaining their reported levels of nativist sentiment — interestingly enough, both for the economic and cultural dimensions of nativism.

This raises the question of whether providing Canadians with arguments about the economic benefits of immigration can build support for immigration. There is some indication that this is the case — as we saw earlier, respondents with higher levels of factual immigration knowledge are less likely to misperceive immigration's effects on the economy and crime.

We decided to use an experiment to answer this question. We randomly assigned to respondents the following excerpt of a report by the Conference Board of Canada on the economic effects of immigration that was lightly edited for clarity:[14]

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14   The Conference Board of Canada. May 15, 2018. Imagining Canada's Economy Without Immigration.

"Canada's aging population and low birth rate is hindering economic growth. In the decades to come, economic growth is expected to average 1.9 per cent assuming Canada continues to gradually increase its inflow of newcomers.

However, if Canada does not welcome any immigrants over the next 20 years, Canada's economic growth would slow to an average 1.3 per cent annually. Boosting immigration to 1 per cent of Canada's population (about 400,000 immigrants per year) would help to keep Canada's population, labour force, and economy growing at a modest rate. Immigration is beneficial for the long-term health of the Canadian economy."

Half of respondents received this text, while the other half did not.[15]

It appears this information mattered to respondents. Twenty-three percent of respondents who did not receive the information thought immigration was bad for the economy, compared to only 19% of those who did receive the information. In contrast, 57% of respondents who did not receive the information thought immigration is good for the economy, compared to 63% of those who did. These differences are statistically significant (p<0.05).
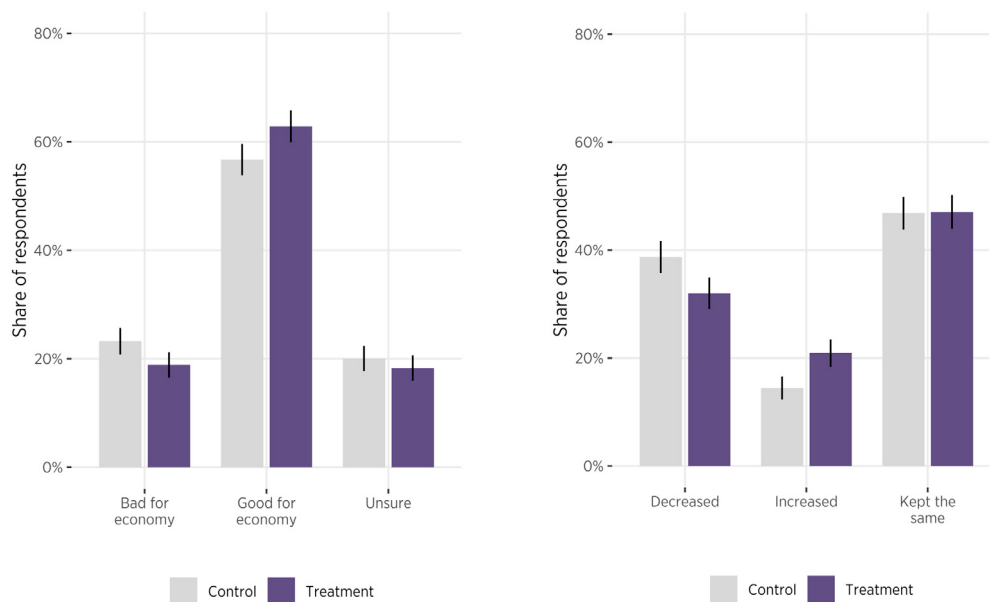

Figure 2.6.6. Respondent attitudes towards immigration with (treatment) and without economic information (control)

This information also had spillover effects for respondent preferences about immigration levels. Thirty-nine percent of respondents who did not receive the information wanted immigration levels decreased, compared to 32% of those who received the information. In contrast, 14% of respondents without the information wanted immigration levels increased, compared to 21% of those with the information. These differences are also statistically significant (p<0.01).

15   We dropped respondents who were only on the screen with the information for two seconds or less.

The information we provided appears to have persuaded some of our respondents about the economic benefits of immigration and heightened their support for immigration more broadly. But how do these persuasive effects vary by partisanship? Theories of motivated reasoning suggest partisan respondents will reject information that doesn't conform to their existing values or beliefs.[16] In light of this, we might expect persuasive effects to be confined to left-leaning partisans.

Interestingly, this is not what we found: the effects were actually strongest among right-leaning partisans. As **Figure 2.6.7** shows, the estimated share of right-leaning partisans who thought immigration is bad for the economy was 7 points lower among those who received the information compared to those who did not (0.23 vs. 0.30), which is a marginally significant difference (p~0.08). Similarly, the estimated share of right-leaning partisans who thought immigration levels should be reduced was 10 points lower among those who received the information (0.44 vs. 0.54), which is a significant difference (p<0.05). The treatment did not have a significant influence on attitudes of left-leaning partisans.
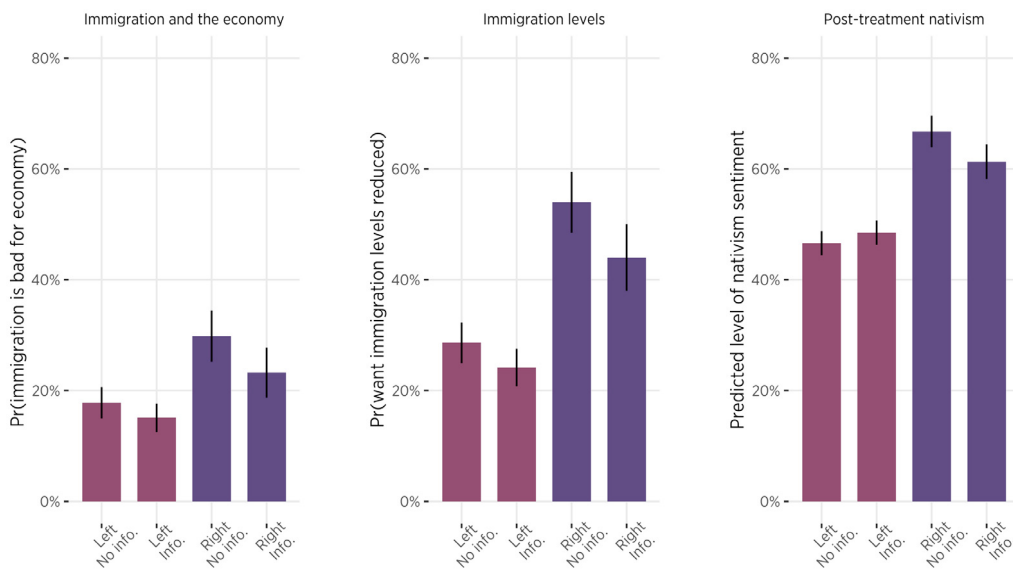

Figure 2.6.7. Estimated immigration attitudes for left- and right-leaning respondents with and without economic information

We asked several questions of those who received the information that can allow us to construct an index of nativism (rescaled from 0 to 1, where 1 is the most nativist) to see if our intervention could have spillover effects on nativism more broadly. Importantly, these particular questions do not speak to the economic effects of immigration. Again, our treatment appeared to have an influence on right-leaning partisans. Among these respondents, nativism dropped 6 points from respondents without the information to those with the information (0.67 vs. 0.61), which is statistically significant (p<0.05).

16   Kunda, Z. 1990. The case for motivated reasoning. Psychological Bulletin, 108(3), 480-498; Kahan, D.M., Jenkins-Smith, H., and Braman, D. 2011. Cultural cognition of scientific consensus. Journal of Risk Research, 14(2), 147-174; Flynn, D.J., Nyhan, B., and Reifler, J. 2017. The nature and origins of misperceptions: Understanding false and unsupported beliefs about politics. Political Psychology, 38(S1), 127-150.

Finding: Providing respondents with information about the economic benefits of immigration made them more aware of those benefits, more supportive of higher levels of immigration and less nativist, particularly among Conservative partisans. This suggests that nativism might not be as much of an immutable sentiment as commonly believed.

3. THE 2019 CANADIAN ELECTION

3.1 Issue areas

The economy and the environment were the dominant issues of the 2019 election campaign for Canadians both online and offline. Survey respondents consistently ranked those two issues, as well as health care, as their top three priorities throughout the campaign. There were some partisan differences, with Conservatives far less likely to rate the environment as the most important issue.

The SNC-Lavalin affair was a blockbuster news story in the months leading up to the election, so it is no surprise that political ethics was a major topic of discussion among the public on Twitter before the campaign started. However, the topic did not come up in a meaningful way during the second half of the election and discussion almost entirely died down after the election. Meanwhile, the environment and the economy maintained their grip on the public discussion.

The issues prioritized by the news media and election candidates in their conversations on Twitter were not always reflected in the broader public dialogue. For example, journalists placed less emphasis on the environment, more emphasis on immigration, and more emphasis on foreign affairs compared to candidates and the general public on social media.

Important issues in the 2019 Canadian federal election

Respondents were asked to select the most important issue to them in the election over all waves of the survey. They ranked the economy first (21%), just barely edging out the environment (20%) and health care (17%). Immigration (7%) and taxes (9%) trail further behind.

There were differences in the rankings among supporters of the three main parties. Conservative party supporters were much less likely to rank the environment as their most important issue (7%) than Liberal party (21%) and NDP supporters (28%). They were more likely to select immigration (10%) and taxes (14%) as the most important issue, compared to Liberal (4% and 8%) and NDP supporters (5% and 6%). These results are displayed in **Figure 3.1.1.**
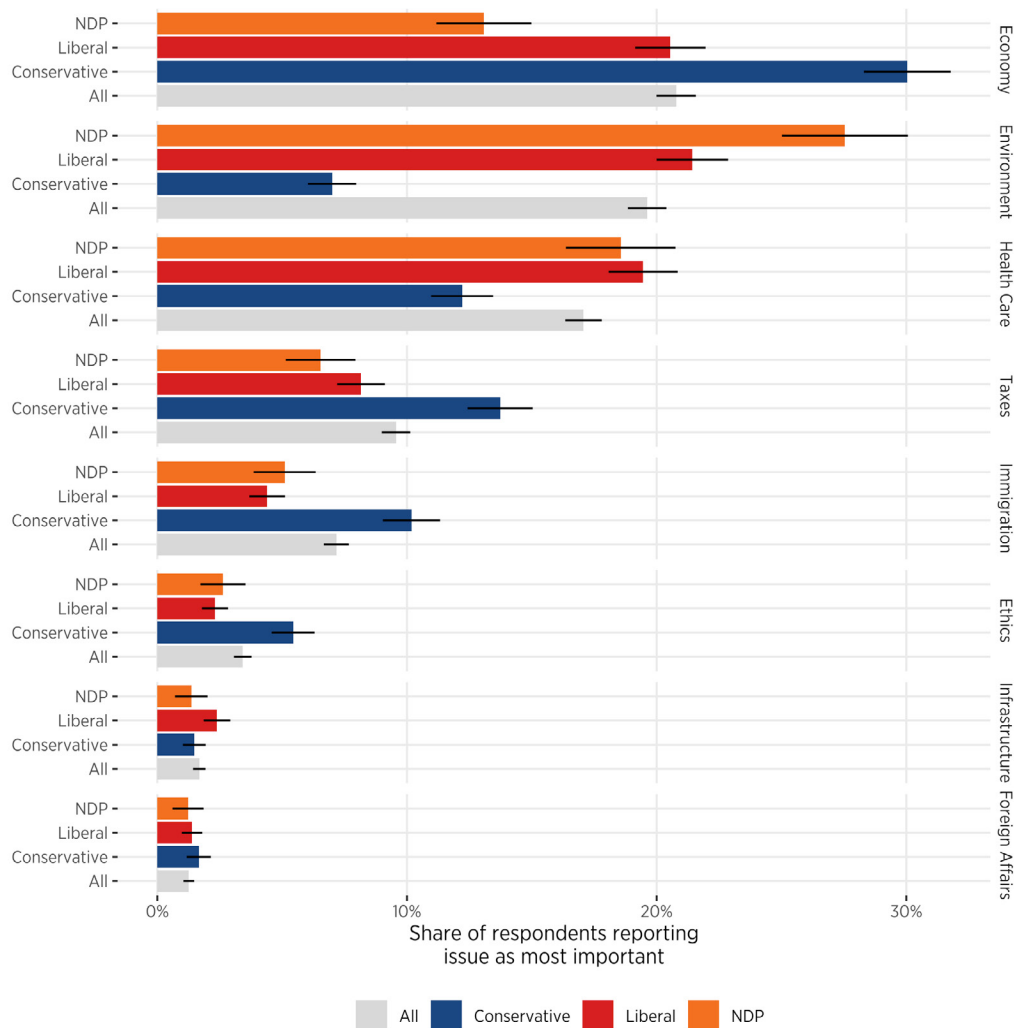

Figure 3.1.1. Percent of respondents indicating issue is the most important in the election campaign.

As the campaign progressed and party policies were revealed, the importance Canadians placed on different issues may have shifted as well. We plot these dynamics over the course of the campaign in **Figure 3.1.2.** The story is mixed. There is some indication that health care modestly slid in importance over the campaign, while the importance of the economy jumped by Wave 3. The environment also appears to have increased in importance, particularly after Wave 6. The top three issues, however, remained in the top three for the entirety of the campaign. Also worth noting is the modestly increasing importance of taxes, and the declining prominence of immigration.
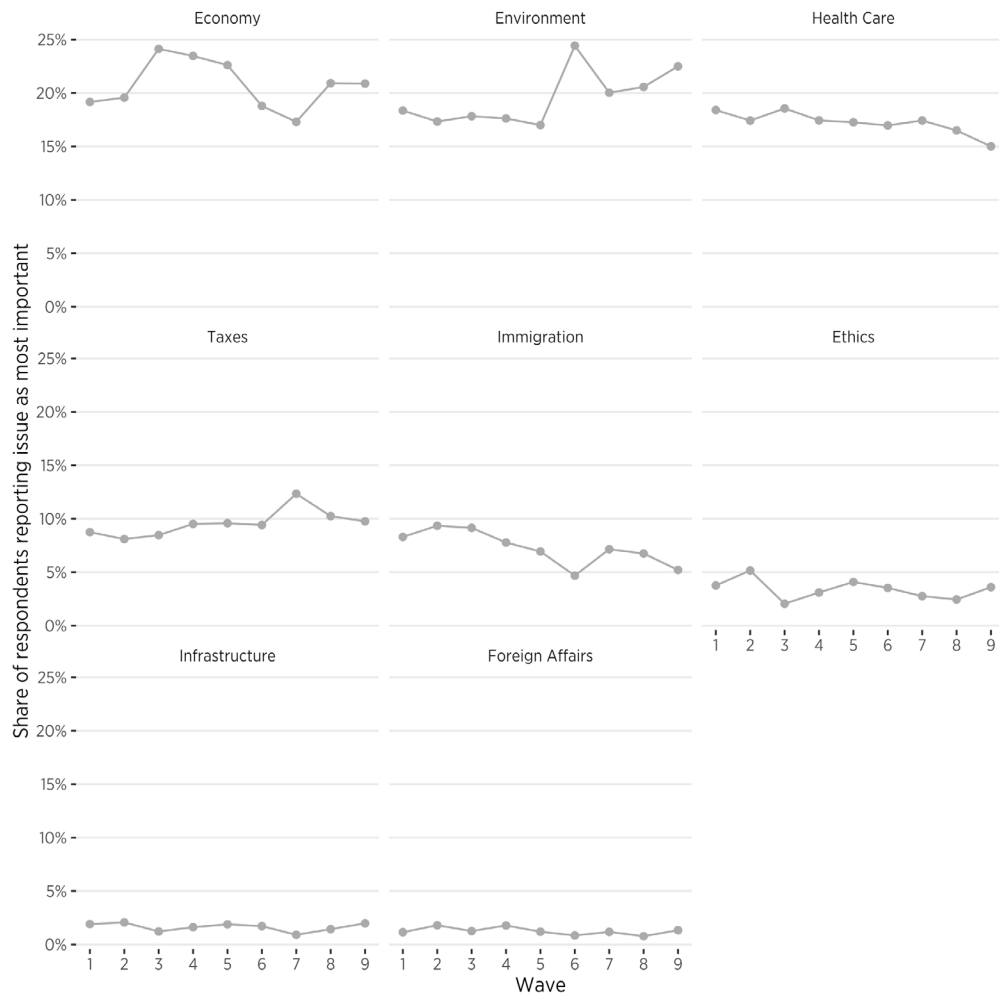

Figure 3.1.2. Percent of respondents indicating issue is the most important in the election campaign from Waves 1 through 9

Finding: The economy, environment and health care were the three dominant issues of the 2019 campaign for Canadians, though there were some partisan differences, with Conservatives far less likely to rate the environment as the most important issue. Over the course of the campaign, the economy, the environment and taxes appear to have gained steam as issues of importance, while health care and immigration slid. However, these differences are substantively modest.

Election issues on social media

Using a dictionary-based topic identification model, we classified all tweets during the election on main Canadian politics hashtags into one of eight issue areas.[1] **Figure 3.1.3** shows the relative emphasis placed on each of the issues by the general Twitter population from Aug. 1 to Nov. 30.
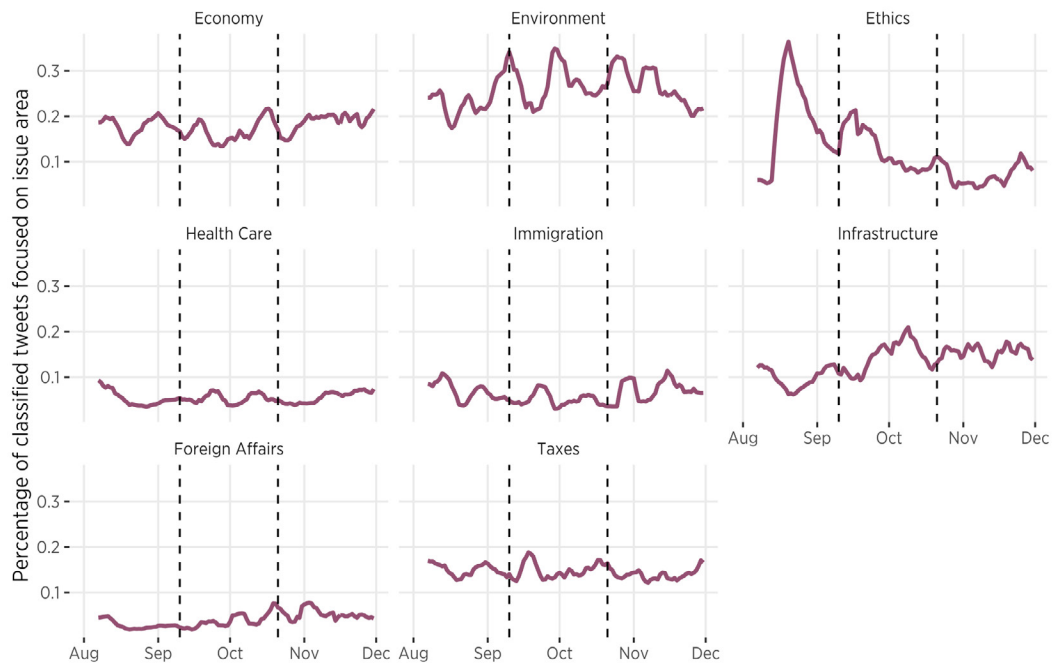

Figure 3.1.3. Issue emphasis on Twitter before, during and after the campaign

An advantage of the social media approach is that we can observe dynamics prior to and after the election as well. There had been a heavy focus on ethics (and particularly the SNC-Lavalin discussion) prior to the election, coinciding with the release of the ethics commissioner's report and House committee meetings on the affair in August, but it did not come up in a meaningful way during the second half of the election and discussion almost entirely died down after the election. The single most important issue during the election was the environment, with the economy also playing an important role. Meanwhile, immigration, health care, foreign affairs and taxes all saw minimal discussion. Interestingly, despite health care being a priority for Canadians, there was very little discussion of that file on Twitter.

The extent to which these issue priorities were reflected by journalists and candidates can also be measured on Twitter. **Figure 3.1.4** shows the seven-day rolling averages for issue emphasis for three groups on Twitter: candidates, news media (including news organizations and individual journalists), and the general public. For some issues (e.g. economy),

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1   Tweets on these hashtags with none of the issue-related words were removed from the analysis.
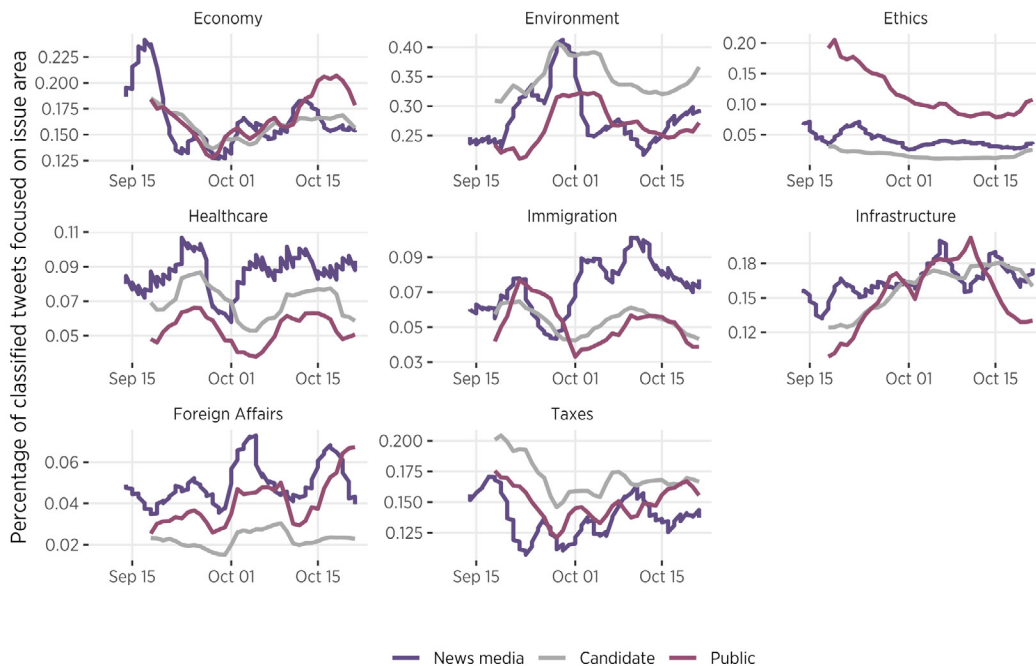
Figure 3.1.4. Issue emphasis on Twitter by candidates, journalists and the general public during the campaign

there is little variance between the three groups. For others, however (e.g. the environment, ethics, immigration and foreign affairs), there are important differences between the groups. Journalists placed less emphasis on the environment, more emphasis on immigration, and more emphasis on foreign affairs compared to candidates and the public. Also importantly, there seems to be a leading effect from the media to other groups for some issues. This might be indicative of a Twitter public being highly responsive to the issue priorities of the news media — a validation of agenda-setting theory, in which news media is said to de-termine the issues that are covered during campaigns and both candidates and the mass public develop their priorities on the basis of what media deems important.[2]

Finding: The issues Canadians discussed on Twitter during the election echoed the priorities they identified in the survey, with the environment and the economy leading all other issues throughout the campaign. The media and political candidates, meanwhile, were more in-clined to discuss issues such as health care, immigration and taxes, and less likely to discuss the environment as the campaign went on.

2   See McCombs, M.E., and Shaw, D.L. 1972. The agenda-setting function of mass media. Public Opinion Quarterly 36(2), 176-187.

3.2 Election interest and digital engagement

Canadians were highly interested in the 2019 election through the duration of the campaign. We asked respondents in all nine waves of our survey to rate their interest in the election campaign, and in politics generally, on 0 to 10 scales. This level of interest barely budged over time, which suggests it was not affected by the dynamics of the campaign.

Canadians' interest in the election could also be seen on social media. Twitter activity on Canadian political hashtags jumped by at least 800% during the campaign, and we saw similar patterns of activity on Facebook groups dedicated to Canadian politics.

We also tracked candidates' activities across a range of social media platforms. Contemporary elections are fought on numerous battlegrounds, with social media emerging as an effective way for candidates and parties to share their messaging to persuade and mobilize voters. We found the Liberal party had the most organized social media presence. They collected the most favourites and comments across Facebook, Twitter and Instagram, and Canadians were exposed to their social media posts far more than those from the other parties. The Conservatives, however, had an edge on Facebook sharing activity.

Canadians' interest in the 2019 election

The first thing to note is that Canadians, broadly speaking, appear to have been very interested in the election campaign and are quite interested in politics generally. We asked our respondents in all nine waves of our survey to rate their interest in the election campaign, and in politics generally, on 0 to 10 scales, where 10 indicates they are very interested, and 0 signals they are not at all interested. The average response for interest in the campaign was 7 points on this scale, while the average for general interest in politics was 6.2. The distribution of responses to each of these questions is shown in **Figure 3.2.1**. This level of interest barely budged over the course of the election campaign, though there appears to be a modest drop-off in interest with Wave 9 respondents who were surveyed after the election, compared to Wave 8 respondents surveyed just before election day. Wave 8 respondents scored 7.2 points for interest in the campaign and 6.4 points for general interest in politics, compared to 6.6 and 5.9 points for Wave 9.

" WE SAW A CONSISTENT, MASSIVE INCREASE IN POLITICAL ACTIVITY ON SOCIAL MEDIA DURING THE ELECTION "

At the same time, we saw a consistent, massive increase in political activity on social media during the election. The largest growth was on Twitter. Activity on Canadian political hashtags slowly built throughout the month of August, with the real growth beginning in September, coinciding with the writ period, and continuing until the day after the election. **Figure 3.2.2** shows the proportion of tweets and retweets on each of the top eight hashtags over time, illustrating how each increased over the course of the campaign. Comparing the amount of activity in late October to that of early August, we saw participation peak at an eight-fold increase. The main hashtags associated with election activity were #cdn-
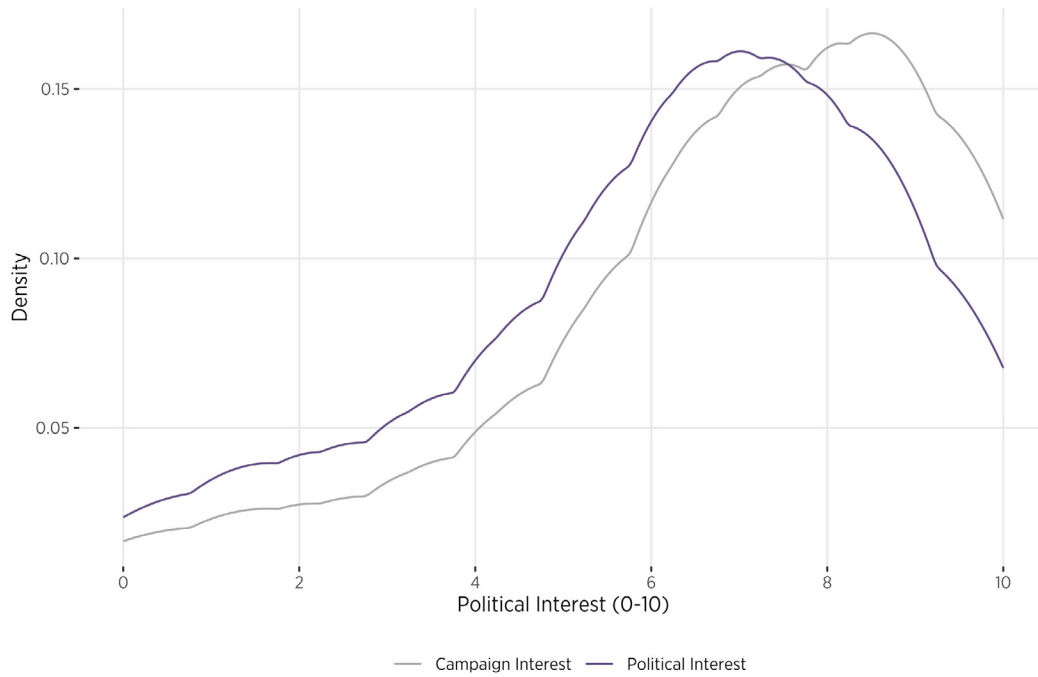
Figure 3.2.1. Distribution in campaign and general political interest, kernel density plot. Note: 0 to 10 scale where 0 is not at all interested and 10 is very interested.
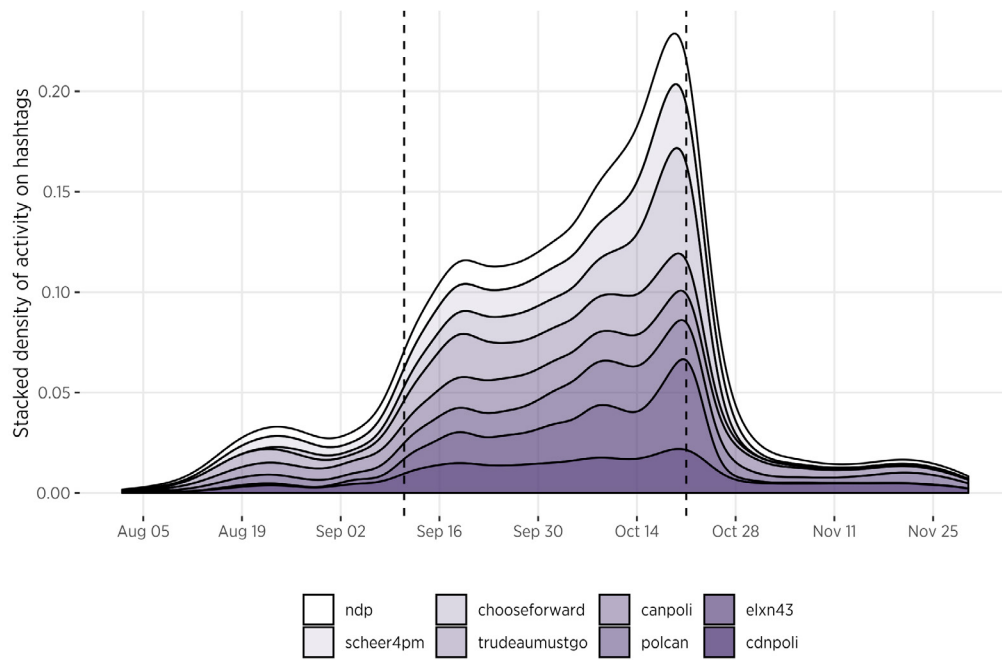

Figure 3.2.2. Density of Twitter social media posts for top eight Canadian politics hashtags

poli, #elxn43 and #polcan, although partisan-specific hashtags also received an enormous amount of attention. Note that numerous other hashtags emerged during the election but have not been included to allow comparability; however, this makes the eight-fold increase a likely underestimate of the overall volume.

Following the election, overall attention in Canadian politics dropped precipitously to its early-August levels. We find similar patterns on political Facebook groups tracked throughout the election period.
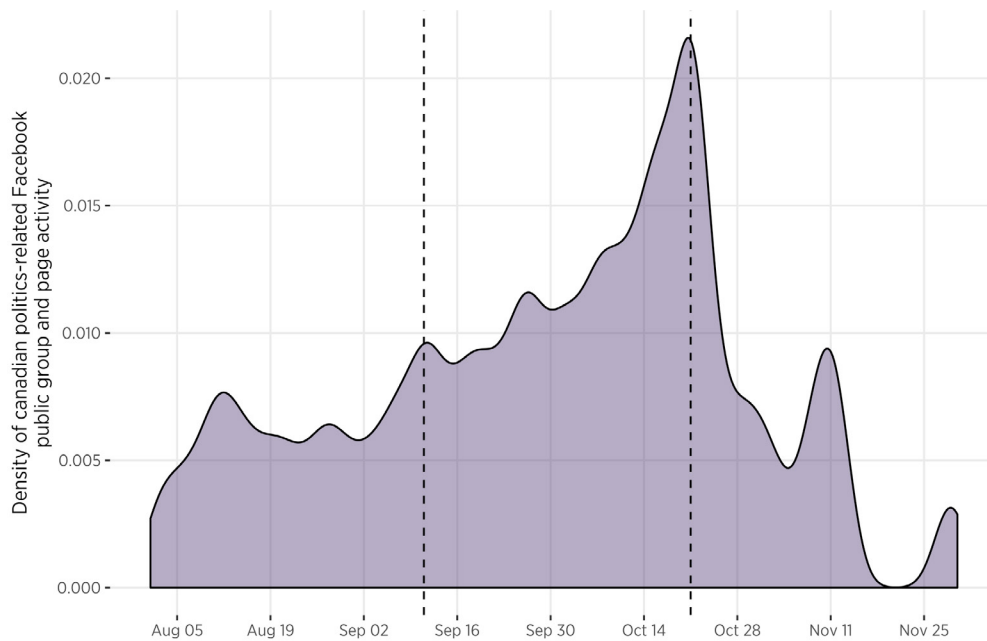

Figure 3.2.3. Density of Facebook social media posts for 1,575 public Canadian politics pages and groups

Finding: Canadians are broadly interested in politics and expressed even more interest during the election campaign. Their level of interest did not appear to be affected by the dynamics of the campaign. Political discussions on social media also spiked throughout the election period.

Candidate activity on social media

For this election, we tracked candidates' activities across a range of social media platforms. The data shared in this report is based on candidates' use of Twitter, Facebook and Instagram. (We performed an automated search for YouTube channels using party and candidate names but found mostly inactive accounts, so analysis of that platform is not included here.) Candidate social media accounts were compiled from party-provided lists as well as computer-assisted name searches across the three platforms. The data includes all posts and engagement across the three platforms from Aug.1 to Oct. 21.
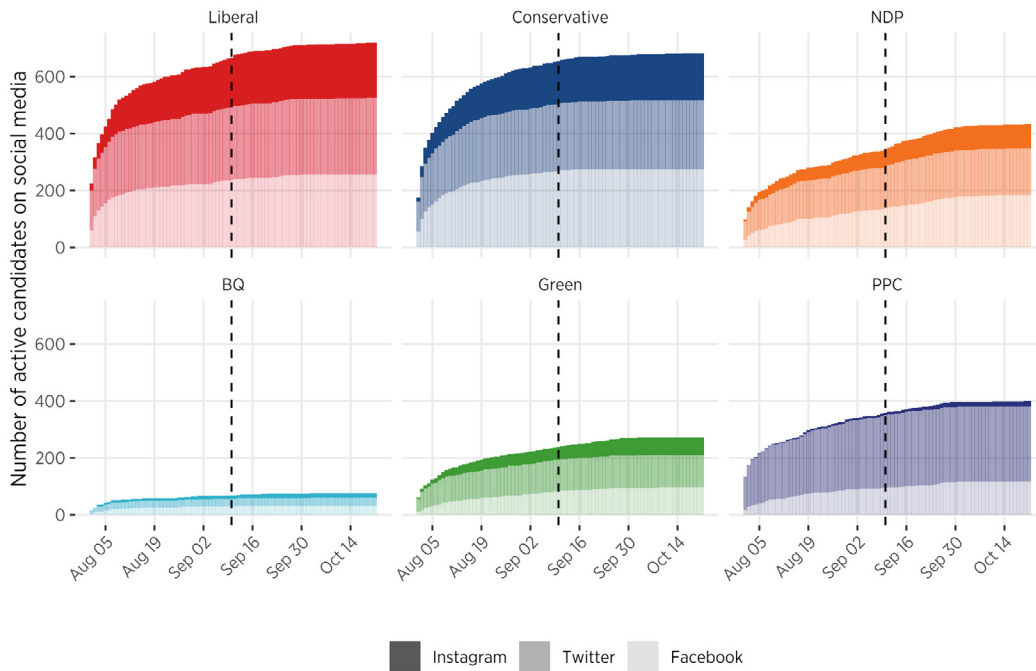
Figure 3.2.4. Number of active social media accounts by candidates of major political parties

Figure 3.2.4 shows the number of candidates using Facebook, Twitter and Instagram since Aug. 1. Generally, most candidates used Twitter and Facebook, although Instagram use became increasingly popular among Liberal and Conservative candidates. We see that the
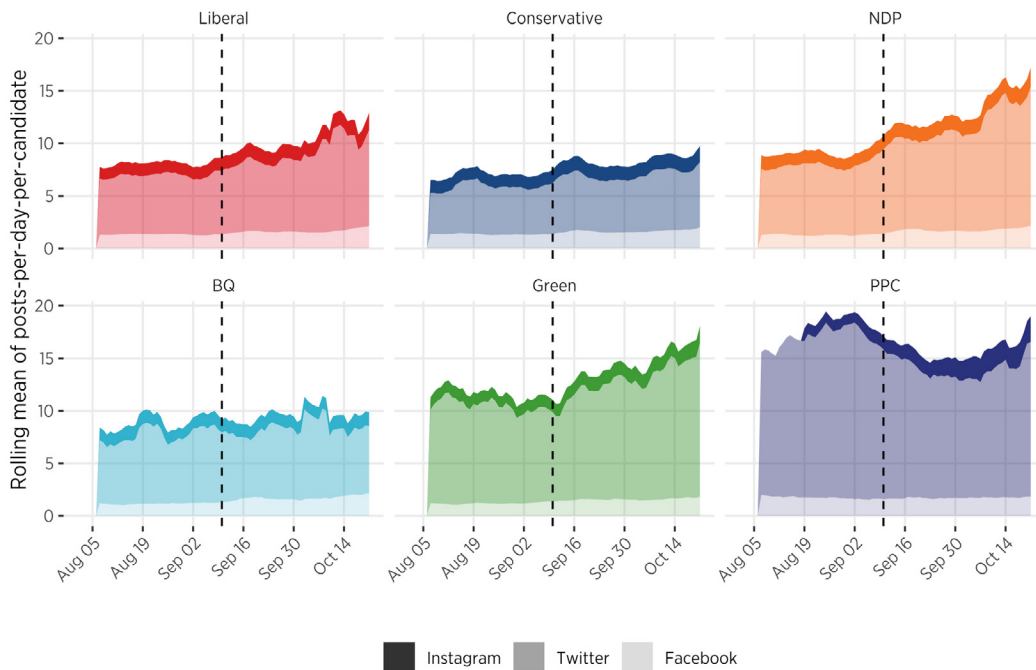

Figure 3.2.5. Frequency of posting by candidates of major parties.

Liberals and the Conservatives were neck-and-neck for social media accounts throughout the campaign, with the Liberals having the most accounts by the end of the campaign at approximately 700. The NDP took much longer to build their social media presence with many late nominations and candidates.

Parties' presence on these sites does not in itself indicate popularity or relevance. Here we highlight three additional measures: frequency of posts (normalized by candidate), reach of content shared on social media and engagement with content posted on social media. **Figure 3.2.5** shows the frequency of posts by candidates of the six major parties across all three platforms in the pre- and post-writ periods. While Facebook, Instagram and Twitter were all used, it appears Twitter was preferred for regular updates by candidates. In fact, while many candidates had Instagram accounts, there was relatively little activity there, with no party having more than 0.5 posts per candidate per day, on average. While there were more Liberals and Conservatives on social media, NDP candidates were the most active of the three main parties. Again, the PPC is an outlier in that its social media activity was driven almost entirely by Twitter use.

After the campaign period began on Sept. 11, there was a clear uptick of social media activity for all parties, with an overall increase in candidate activity of about 20%. The NDP saw the largest net increase.

Figure 3.2.6 shows a measure of candidates' reach on these social platforms: the total number of followers reached per post per party per day. Here the Liberals had a distinct
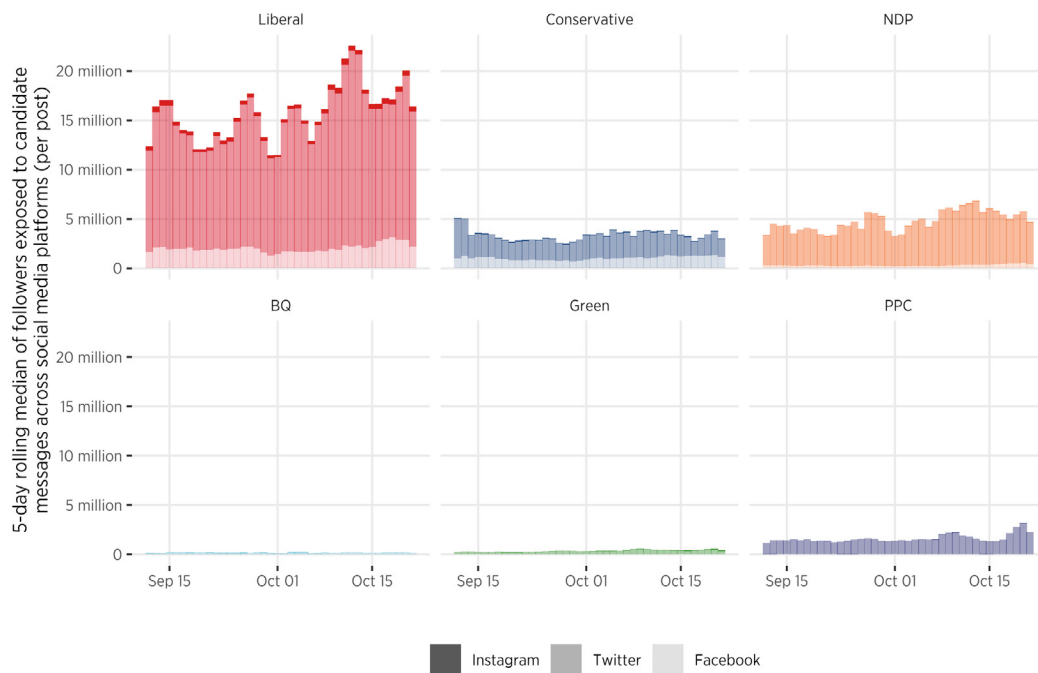

Figure 3.2.6. Total daily sum of followers from candidate accounts on Instagram, Twitter and Facebook

advantage, with many prominent candidates (including high-profile incumbents) having large followings across all three platforms. Due to the posting frequency and high number of followers, Twitter was the platform where candidates received the most exposure, with fewer followers overall on Instagram and Facebook.
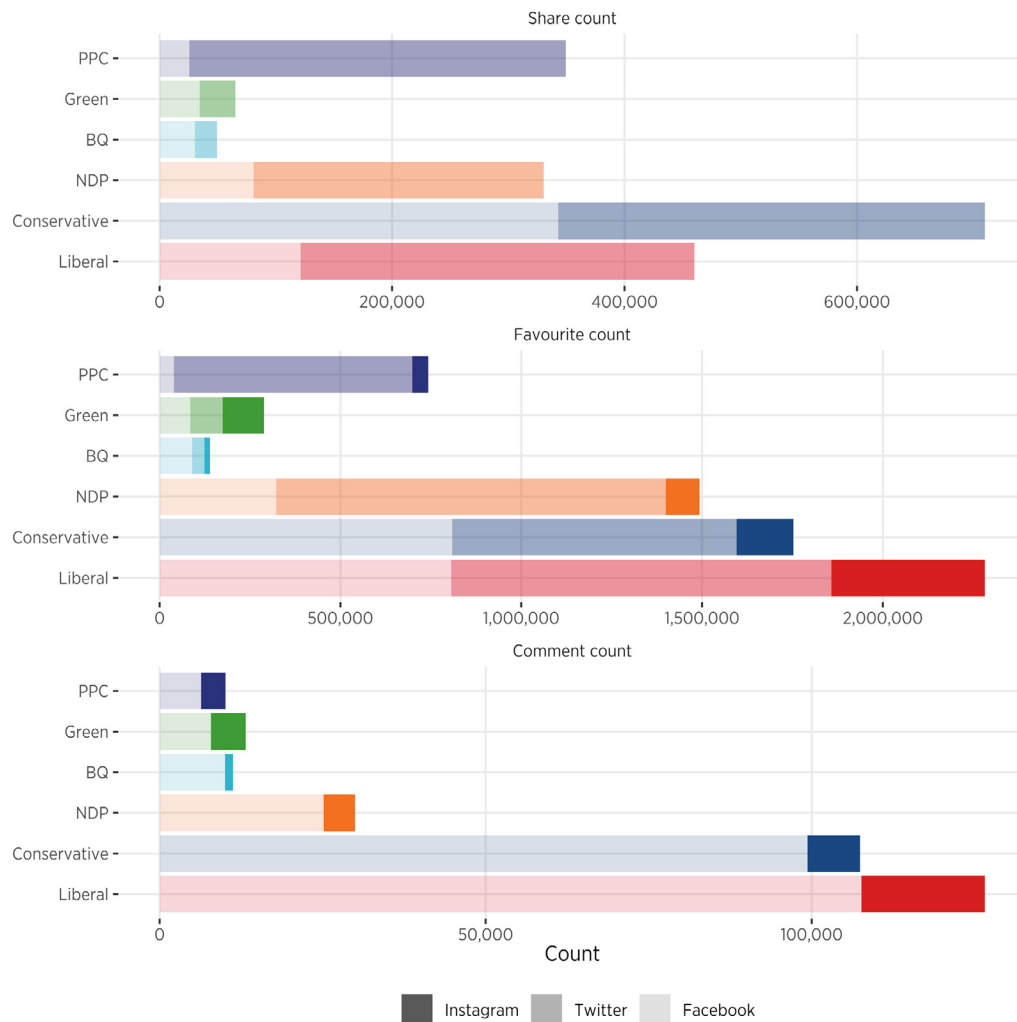

Figure 3.2.7. Total number of shares, favourites and comments on posts by candidates of major parties across Instagram, Facebook and Twitter

Reach does not paint a picture of actual engagement of Canadians with parties and candidates on social media. **Figure 3.2.7** shows measures for engagement, which is a stronger indicator that a message has been read and shared with others. Here, the Liberal advantage was much less clear — they led the Conservatives on favourites and comments but not on shares. In fact, Conservative candidate posts were shared at a much greater volume than Liberal. While Twitter appeared to be a platform best utilized by the NDP and Liberals, Conservatives enjoyed more recognition on Facebook.

Finding: The Liberal party had the most organized social media presence. They collected the most favourites and comments across Facebook, Twitter and Instagram, and Canadians were exposed to their social media posts far more than those from the other parties. The Conservatives, however, had an edge on Facebook sharing activity.

3.3 Case Studies

This chapter consists of four specific case studies. Each case focuses on a problem area of the social media environment.

Hate speech

The 2019 Canadian election fuelled heated debates on social media. The ability to post anonymously on online platforms may lead users to feel more comfortable posting hateful language directed at candidates or other users.[1] Hateful election-specific hashtags can mobilize users with a common set of ideological beliefs, and are sometimes elevated to trending topics on platforms.

Here we examined the prevalence of hateful speech on Twitter. To determine hateful speech we used a dictionary-based approach that draws on Hatebase, a popular crowdsourced database of hate terms, for coding English-language tweets.[2] Our analysis proceeded in two steps: we first examined whether certain hashtag communities are more hateful than others, and then we examined if there are differences in hateful language employed by left- and right-leaning partisans. We define users as left-leaning if they follow at least five NDP, Liberal or Green party candidates and right-leaning if they follow at least five PPC or Conservative candidates.

Hateful hashtag communities

Hashtags are an important part of the way Twitter users communicate with one another. They are used to reflect a particular subject but also a particular attitude or position. For example, #cdnpoli, #trudeaumustgo and #chooseforward are all hashtags about Canadian politics but they all have different sentiments. The first is neutral, signalling that the tweet is about Canadian politics in general; the second has a negative sentiment, focused on pushing Justin Trudeau's government out of office; and the third is positive, drawing its name from the Liberal campaign slogan and promoting the Liberals.

We took the top 100 hashtags focused on Canadian politics during the election and manually classified each as either neutral, positive or negative. We then searched the approximately two million tweets that used these hashtags over the election for hateful language. Of those tweets, 20,852 contained offensive words, though we included most ambiguous terms regardless of their context.[3] **Figure 3.3.1** shows the percentage of tweets by hashtag category that use hateful language.

The proportion of tweets containing toxic language remained low (less than 1.5%) even in negative hashtags. The results are consistent with other estimates made in other North

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1   Citron, D., and Norton, H. 2011. Intermediaries and Hate Speech: Fostering Digital Citizenship for Our Information Age. Boston University Law Review, 91, 1435.

2   See https://hatebase.org/. Here we analyze only English-language tweets as Hatebase does not contain a French-language translation and the French-language version is sparse and incomplete.

3   Two exceptions were the very frequently used words "chief" and "globalist," whose meaning would not be interpreted as offensive in the context of most tweets in our dataset.

American contexts. For example, Gao[4] reported a hateful tweet rate of 0.6% during the 2016 U.S. elections. Our result of between 0.7 and 1.5% is similar despite methodological differences. A manual annotation approach is likely to produce better results as it can better identify instances where a hate term is used ironically or in an otherwise non-hateful manner.

Unsurprisingly, users mobilized around a supportive hashtag were less likely to use hateful terms. We also found some tweets containing hateful content on positive hashtags, sometimes involving a marginalized community taking ownership of a historically offensive term such as "queer," which has been reclaimed by some members of the LGBT community.
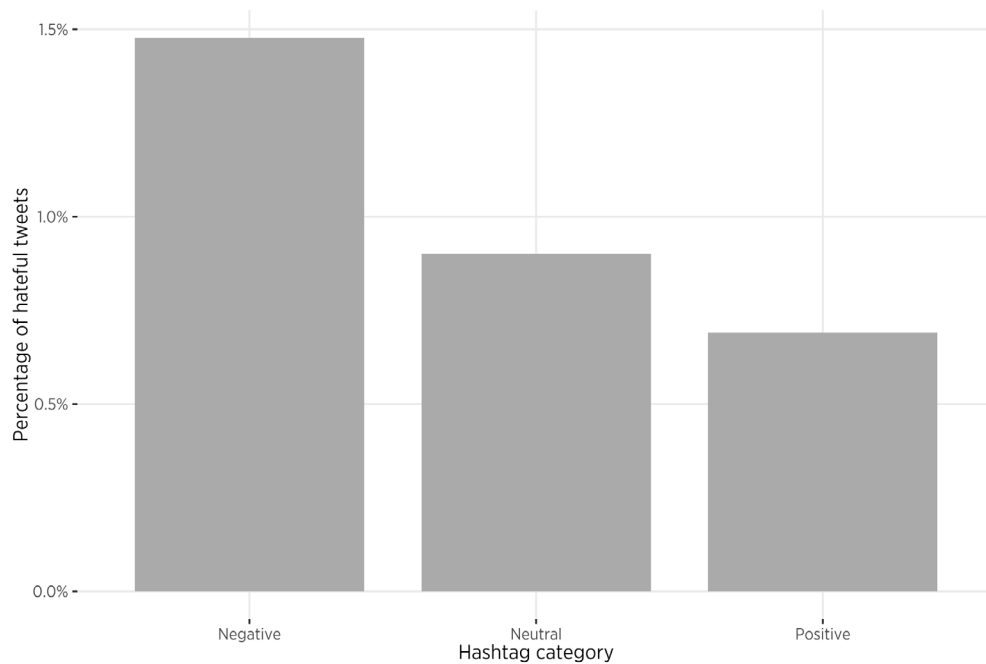

Figure 3.3.1. Proportion of hateful terms by implied hashtag sentiment[5]

Hate speech and partisanship

Having established that the usage of hateful vocabulary is fairly low on Canadian political hashtags, we turned our attention to the users employing hate terms. Starting from the complete set of 152,954 tweets containing offensive terms, we isolated slurs appearing less than three times and removed tweets containing them. The final dataset consisted of 38,625 tweets.[6]

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4   Gao, L., Kuppersmith, A., & Huang, R. 2017. Recognizing explicit and implicit hate speech using a weakly supervised two-path bootstrapping approach. Proceedings of the The 8th International Joint Conference on Natural Language Processing, 774–782.

5   **Examples of positive hashtags:** chooseforward, cpc19, cpc, ppc2019, scheer4pm, ndp, istandwithtrudeau, chooseforwardwithtrudeau, choosemaxime, uprisingh, ndp.
    Examples of negative hashtags: trudeaumustgo, liberalismisamentaldisorder, trudeauworstpm, trudeaucorruption, defundcbc, trudeaumustresign, scheerlies, liberalsmustgo, scheerdisaster, scheercuts, lavscam, stopscheer, neverscheer.
    Examples of neutral hashtags: cdnpoli, elxn43, polcan, election2019, elxn2019, elx43, canpoli, canadavotes2019, debatdeschefs2019

6   There was some class imbalance, which was adjusted by downsampling the majority class. An 80/20 train/test split was used along with 10-fold cross-validation to tune the regularization.

Next, we looked at the use of hateful terms across the political spectrum. Users interacting with each other tended to converge into groups in terms of offensive language.[7] Partisanship labels were created by labelling PPC and Conservative partisan tweeters as "right" and Liberal, NDP and Green users as "left." To show this, we used regression analysis to predict left vs. right ideology based on hateful terms used in a tweet. The resulting model selects a subset of slurs that have predictive value for ideology, though the effect size is not reliable.[8]

Figure 3.3.2 shows a distribution of hateful terms based on how likely they are to indicate the user's partisan alignment. We see that there is a large set of words, such as "idiot," that are used by both ideological sides, whereas recognizably polarizing terms are more closely linked to their expected partisan position. For example, users who deployed the terms "feminazi" or "libtard" were more likely to be right-leaning and referring to a left-leaning target. Meanwhile, left-leaning users were more likely to use stereotypical terms such as "hillbilly" or "white trash." The position of "queer" on the left side of the spectrum demonstrates how a marginalized community can take ownership of a slur: in this case it made those users recognizable as left-leaning to our model but would not be considered a hateful comment.
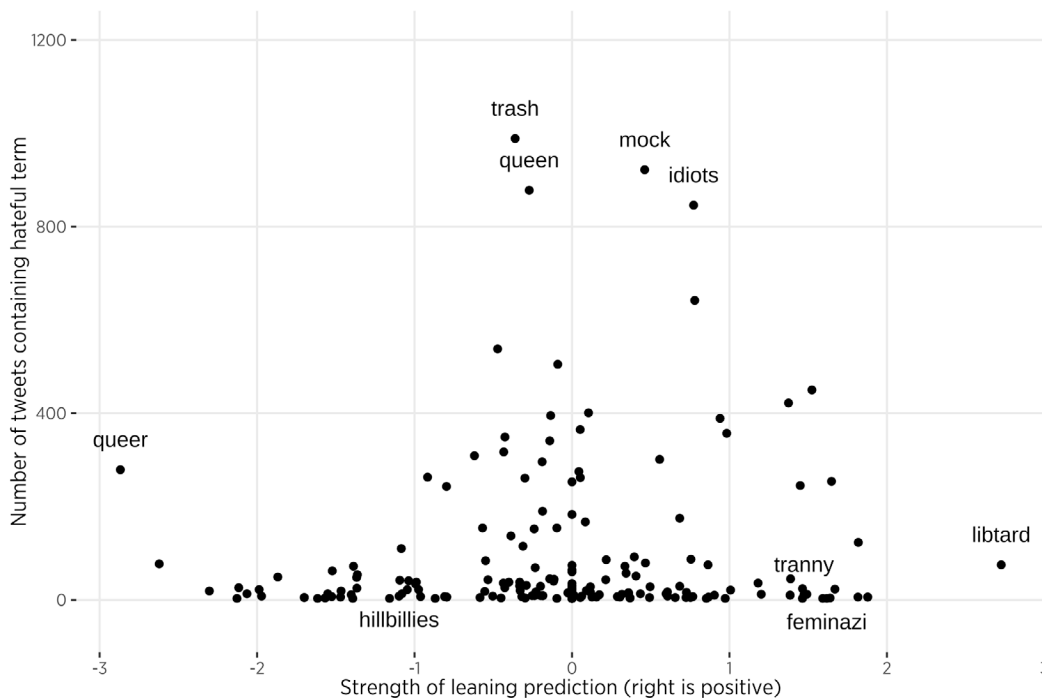

Figure 3.3.2. Hate word frequency vs. predictive power for political leaning

Knowing that hateful terms can indicate the ideology of a Twitter user, we shift our attention to a broader scale and investigate what types of slurs are favoured by each side.

7   Erjavec, K., and Kovačič, M.P. Nov. 19, 2012. "You Don't Understand, This is a New War!" Analysis of Hate Speech in News Web Sites' Comments. Mass Communication and Society, 15(6), 899-920.

8   We trained a logistic regression model with L1 regularization. In the case of a pair of highly correlated terms, the model will assign a coefficient of 0 to one at random.

Figure 3.3.3 breaks down the 10 most frequent unambiguous[9] terms per ideology into five categories: gender, intelligence, ethnicity, class and other.[10] This is a smaller sample of tweets (551) because unambiguous slurs are used less frequently than terms whose meaning cannot be misinterpreted.

More than 30% of the slurs used by left-leaning Twitter users involved calling their ideological opponents classist terms such as "hillbilly." Meanwhile, right-leaning users often used gender-based and sexualized slurs such as "slut" to refer to the incumbent prime minister and other politicians.
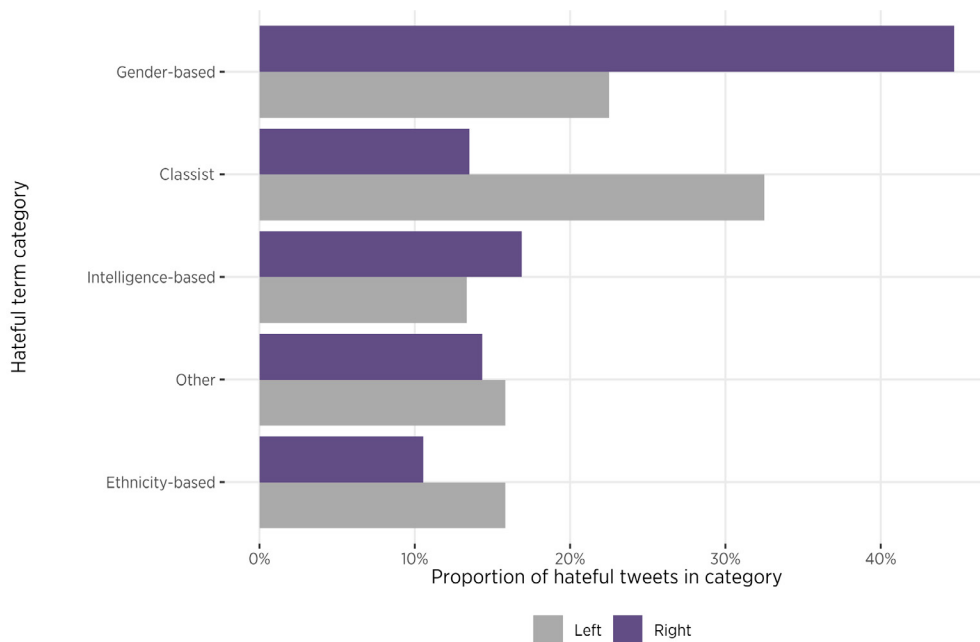

Figure 3.3.3. Hate word category preference by political leaning

Findings: Overall, hateful language remained fairly infrequent but was more likely to appear in tweets using hashtags that are generally used to express a negative attitude or opinion. More than 30% of the slurs used by left-leaning Twitter users involved classist terms, while right-leaning users often used gender-based and sexualized slurs.

Co-ordinated inauthentic behaviour

Significant media attention in the past three years has been devoted to the possibility that political actors are using coordinated social media accounts — either automated ("bots") or manually controlled, or a hybrid ("cyborgs") — in an attempt to influence online dis-

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9   Our use of unambiguous here implies that the word cannot generally be used in regular conversation. "Chief" would be an example of an ambiguous slur.

10   Examples of slurs that belong to each category (includes language that may be offensive to some readers): gender featured a variety of sexist, homophobic and transphobic slurs such as whore, slut, tranny, cunt, mammy, dyke; intelligence largely featured ableist insults such as retard; the ethnicity category featured racist and xenophobic language such as border jumper, gypsy, shyster; the class category was largely composed of classist slurs like newfie, hillbilly, redneck, white trash.

course. Due to the significant ambiguity about what exactly should be understood as a "bot" or "troll,"[11] a variety of potentially manipulative practices, ranging from mass account-creation to transactions involving real users paid to post specific content, are increasingly referred to by platform companies as "co-ordinated inauthentic behaviour."[12]

Researchers have produced various tools, with varying degrees of sophistication, that look at features of accounts — such as network structure, posting behaviour or account creation dates — to estimate whether a user is inauthentic in some way. Unfortunately, not even the state-of-the-art, publicly available bot detection algorithms can reliably identify whether a Twitter account is inauthentic. This is due to (a) no clear definition of "inauthenticity" or "bot," and (b) the limitations of the metadata available in the public Twitter API.[13] The most effective study on co-ordinated behaviour by suspicious Twitter accounts in a political context dates from 2012, and was carried out by a researcher — previously employed by Twitter — who had access to stronger indicators of co-ordination such as IP addresses and the email addresses used to open the account.[14]

> " *RESEARCH BASED ON FULLY AUTOMATED METHODS OF IDENTIFYING SUSPICIOUS USERS SHOULD BE EXAMINED VERY CAREFULLY AND IS LIKELY TO BE HIGHLY PROBLEMATIC*"

At this time, research based on fully automated methods of identifying suspicious users should be examined very carefully and is likely to be highly problematic. One reason for this is that these models cannot be trained or tested on "ground-truth" data — in other words, on accounts whose authenticity is actually known. For election studies and reporting, the implications of this are severe. It is not an understatement to say that the results of all bot studies are utterly uninformative.

At present, there is a strong argument for a complete moratorium on the reporting of bot detection analysis to the public. Nevertheless, given the assiduous attention given to "bots" in the Canadian (and other) elections, we considered it important to evaluate the results of bot detectors ourselves. We used one such algorithm, Botometer,[15] to investigate users with abnormal behaviour who participated in the electoral conversation online. Despite a growing number of critiques and failed replication experiments,[16] Botometer remains the state-of-the-art publicly available algorithm, having been used in multiple peer-reviewed publications in top outlets.[17]

In order to determine whether an account is automated, Botometer looks at properties

11   Gorwa, R., and Guilbeault, D. 2018. Unpacking the Social Media Bot: A Typology to Guide Research and Policy. Policy & Internet.
12   Starbird, K., Arif, A., and Wilson, T. 2019. Disinformation as collaborative work: Surfacing the participatory nature of strategic information operations. Proceedings of the ACM on Human-Computer Interaction, 3(CSCW), 1-26.
13   Gorwa, R., and Guilbeault, D. 2018. Unpacking the Social Media Bot: A Typology to Guide Research and Policy. Policy & Internet.
14   Thomas, K., Grier, C., & Paxson, V. 2012. Adapting Social Spam Infrastructure for Political Censorship. Proceedings of the 5th USENIX conference on Large-Scale Exploits and Emergent Threats.
15   Botometer. https://botometer.iuni.iu.edu
16   Kreil, M. Undated. The Army that Never Existed: The Failure of Social Bots Research.
17   Vosoughi, S., Roy, D., and Aral, S. March 9, 2018. The spread of true and false news online. Science, 359(6380), 1146-1151.

of the user's profile, the type of interactions with accounts it follows (mentions, retweets, etc.), the network of followed and follower accounts that the user belongs to, the timing of the user's activity, the type of language used, the content the user engages with, and the sentiment of their tweets.[18] The combination of these features paints a rich picture of an individual account, but bot detection is an arms race where malicious automated accounts adapt to avoid detection. The output of Botometer is a score that is then converted into a "complete automation probability" (CAP), which aims to give a conservative estimate of the likelihood of a given account being automated when taking into account the overall prevalence of bots.

For this study, we used a generous CAP threshold of 55% (barely higher than a coin flip) to label an account as potentially automated or otherwise suspicious. This approach supposedly generates false positives — where an account with a CAP of more than 55% is not necessarily a bot account and, even if it is fully automated, it does not imply the account is inauthentic or malicious.

Of the 1,137,212 users in our full Twitter dataset during the election period, we tested 168,846 of the most active users (15%) using Botometer and found that 1% of the tested accounts, responsible for 0.3% of all tweets, displayed evidence of automation that met our threshold. We also see in **Figure 3.3.4** that most accounts had a CAP below 1%, and about 90% of users had a score below 10%.
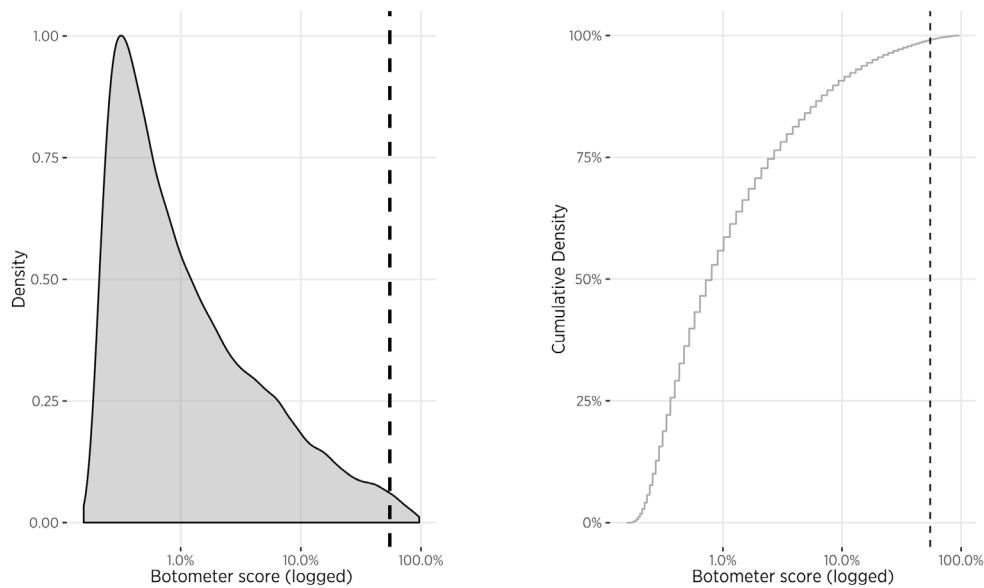

Figure 3.3.4. Density plot (left) and cumulative density (right) of bot scores across all Twitter users. The dotted line represents the 55% threshold

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18   Varol, O., et al. May 2017. Online Human-Bot Interactions: Detection, Estimation, and Characterization. Eleventh International AAAI Conference on Web and Social Media.

Given that Twitter affirmed it had not detected any major election manipulation attempts as of Sept. 24,[19] this result is not particularly surprising. However, we may be underestimating their prevalence because Twitter likely removed accounts it deemed inauthentic. Beyond that, it is entirely likely that some inauthentic accounts have escaped detection from Twitter and Botometer. Also note that the accounts detected by Botometer might not be inauthentic in any way, although they have behaviour that falls outside the norm on one of the features Botometer examines as described above.

We also compare the posting behaviour of human accounts versus those labelled as potentially automated. **Figure 3.3.5** shows the hashtag preferences of possibly inauthentic accounts compared to likely legitimate accounts. Human users seem to tweet using a more varied set of hashtags while the accounts detected by Botometer have a higher proportion of posts in the top 20 hashtags used to discuss Canadian politics, in particular #Canada and #PPC. This is consistent with expectations, as Botometer treats spam as indicative of automation and such behaviour is likely to be more significant in popular hashtags.
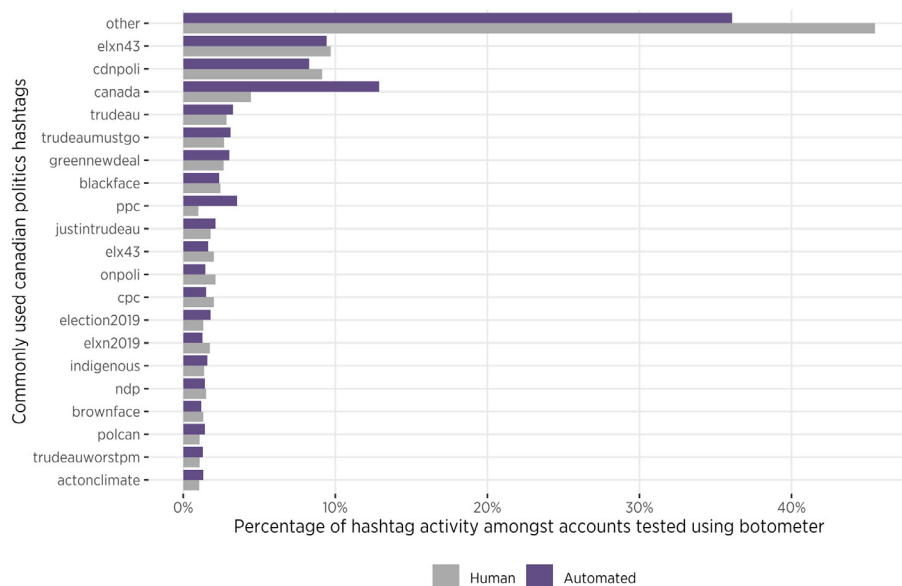

Figure 3.3.5. Hashtag preference for likely automated vs. likely human users

MAGA accounts

In light of media reports pointing to potential inauthentic activity by accounts containing "MAGA" (Make America Great Again) in their profile descriptions,[20] we investigated these accounts and found that, while a higher percentage displayed evidence of automation (2%) as determined by Botometer compared to the broader group of tested users, the overall posting behaviour of MAGA accounts was not indicative of election manipulation or interference.

19   Paas-Lang, C. Sept. 24, 2019. Twitter says Canadian election so far free of major manipulation attempts. The Canadian Press.
20   e.g. Stanley-Becker, I. Oct. 22, 2019. The online MAGA movement tried to take down Canada's Justin Trudeau. It fell short. The Washington Post.

We tested the 6,062 most active MAGA accounts (out of 46,851) and found that 130 (2%) were labelled as bots based on the 55% CAP threshold. As seen in **Figure 3.3.6**, the overall distribution of the automation probability is centred higher than the general Twitter population. If Botometer is to be believed, this suggests that MAGA accounts are slightly more likely to be automated, though this could be explained by a number of other factors that are totally unrelated to inauthentic accounts.
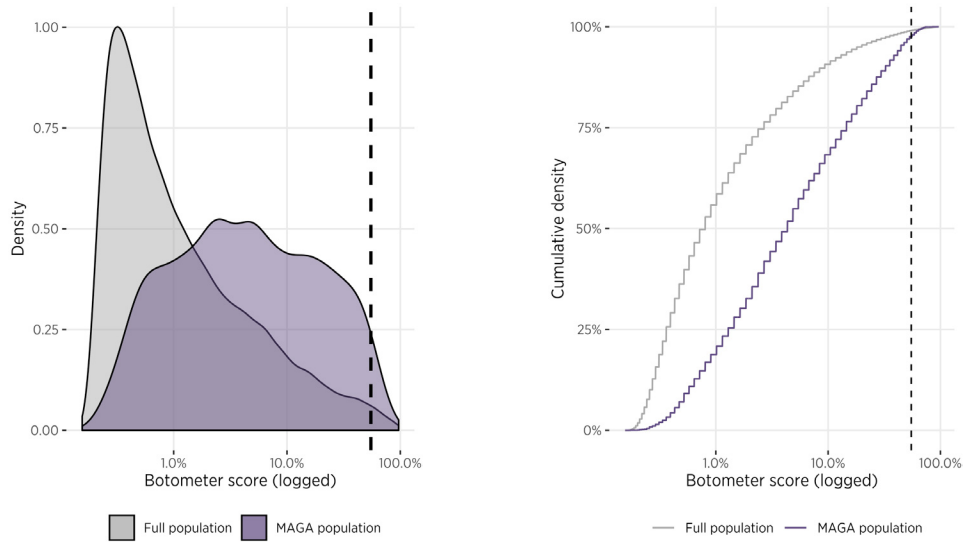

Figure 3.3.6. Density plot (left) and cumulative density (right) of bot scores across MAGA users. The dotted line represents the 55% threshold
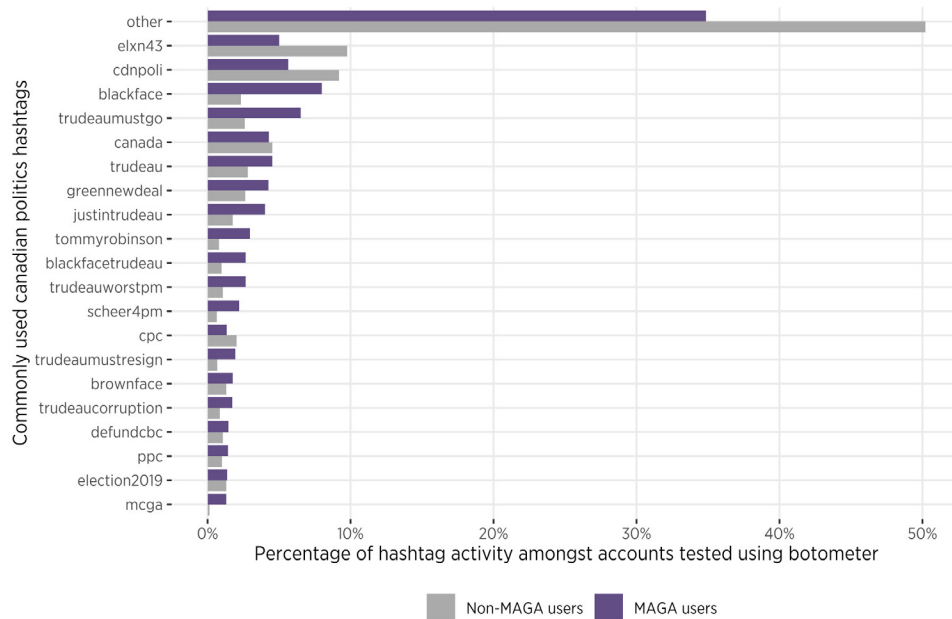

Figure 3.3.7. Hashtag preference for MAGA vs. non-MAGA users

We compared the hashtag preference of the overall set of tested accounts versus MAGA users, with the results shown in **Figure 3.3.7**. MAGA users were much more likely to post on #blackface and #trudeaumustgo compared to the overall pool.

We then looked at the self-reported location of MAGA accounts that posted on our seed hashtags to see the difference in hashtag usage. More than 62% of users either did not declare their location or used a fictional country, but for those who did, many more reported their location as somewhere in the United States (36%) rather than Canada (only 1.4%). (See **Table 3.3.1.**) While the locations of Twitter users cannot be confirmed with complete accuracy, we tried to manually verify the location of key samples of the Canadian users by browsing through their tweet history and looking for engagement with location-specific content. While we did not look at American accounts, a proportion of them might also belong to Canadian citizens living abroad.

Location	Count	Proportion
Canada	346	1.4%
U.S.	8956	36.0%
Other (ex: "world", "fictional country")	6328	25.4%
Unspecified	9267	37.2%

Table 3.3.1. Number of MAGA users per country
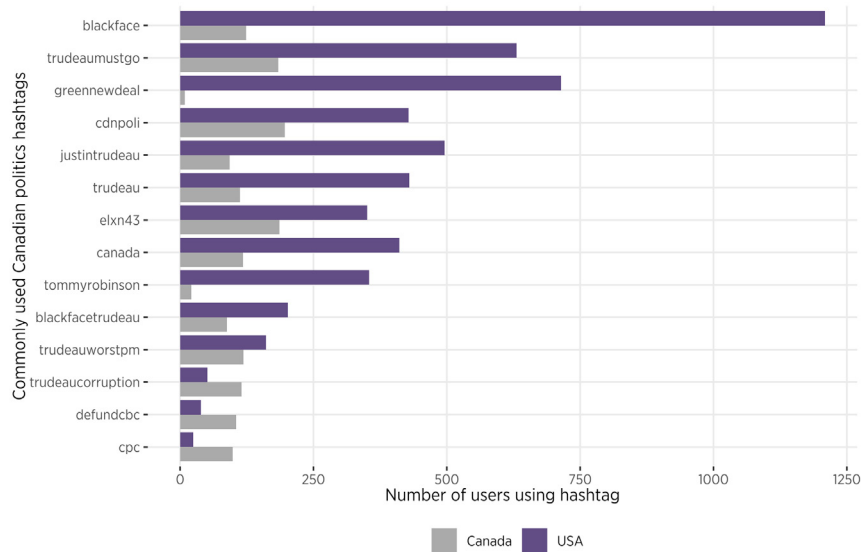
Figure 3.3.8. Number of distinct users posting per location on hashtags in the Top 10 for Canada and/or the U.S.

As **Figure 3.3.8** shows, there was a high presence of accounts identifying their location as the U.S. posting on multiple anti-Trudeau hashtags, particularly #blackface. By comparison, MAGA accounts identifying their location as within Canada tweeted more evenly across a wider range of hashtags, #cdnpoli being the most popular. This suggests that the engage-

ment of American accounts was limited to viral Canadian political content while accounts from Canada tended to engage in a wider set of topics.

We also looked at the tweet count per hashtag and location. As **Figure 3.3.9** shows, MAGA users identifying as Canadian post far more frequently on Canadian political hashtags than American users. Moreover, the average American account tweeting the #blackface hashtag only did so once. This stands in contrast to Canadian MAGA users, who engaged in longer conversations across multiple Canadian hashtags (mainly #trudeaumustgo, #cdnpoli and #elxn43).
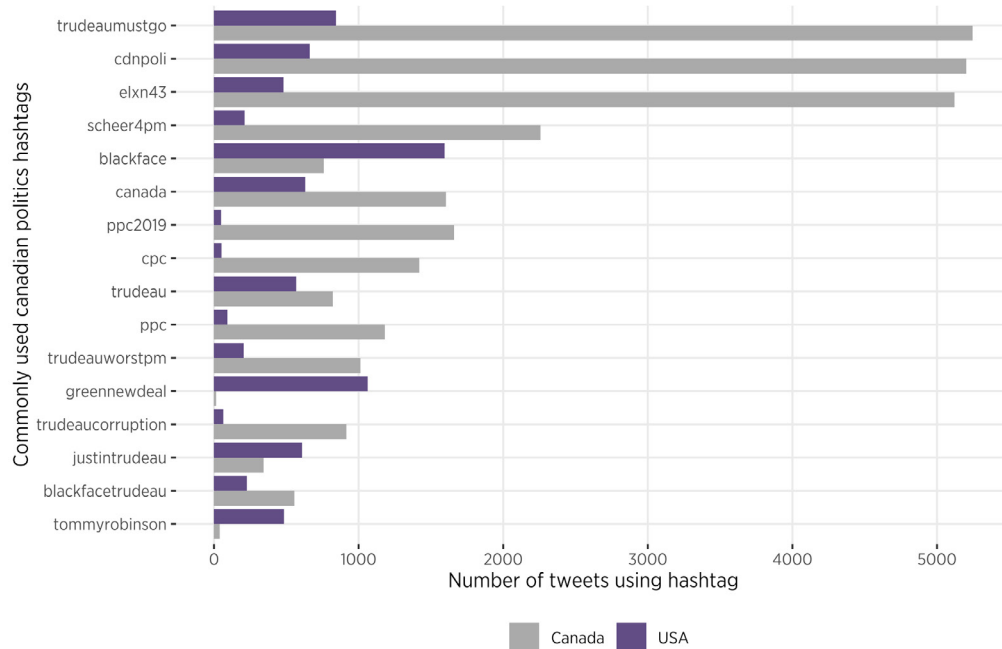
Figure 3.3.9. Number of tweets per hashtag by tweet count and location for hashtags in the Top 10 for Canada and/or the U.S.

We manually inspected tweets by 200 of the least and most frequent MAGA users, as well as a random sample of 100 users, to see whether any patterns of inauthentic co-ordinated activity could be found. We could not identify any spamming behaviour or suspiciously similar textual content amongst these users. Separately, we looked at the 10 most active users both during the election period and again in January 2020 to find that they maintained a high level of engagement with the political conversation post-election. These users also engaged with politically charged stories that were specific to their indicated location within Canada.

Findings: Most accounts engaging in political discourse that have not been taken down by Twitter appear to be authentic. Moreover, despite the higher proportion of accounts appearing to be automated among MAGA users than the overall pool of tested users, we could not find evidence of bot-like activity among those accounts that we would label election manipulation or interference. Looking at MAGA users with self-reported locations revealed that Canadian users engaged in a broader range of political discussions compared to American users, who mostly used Canadian political hashtags to share a story a single time with their network.

Lifecycle of a scandal

The intense pace of an election campaign makes it difficult for any single breaking news story to hold sustained public attention. We examined two major stories that broke during the 2019 election: the emergence of photos of a pre-politics Justin Trudeau in blackface, and the revelation that Andrew Scheer was not an insurance broker as he claimed. Examining online behaviour around these two stories provides insight into the online ecosystem; when a controversial story emerges as suddenly as these did, it allows us to observe how social media behaviour changes in response. Here we sought to understand the reach of each story, the subsequent flurry of social media activity, and the extent to which the parties and their supporters engaged on the issue.

In both cases, we find that the peak of activity surrounding the revelations occurred for approximately 48 hours, with declining attention followed by very little broad-based interest five to seven days after the story broke. We find that there were similar declines in interest across political candidates, journalists and the mass public. We also find that attention to these stories was largely isolated to specific partisan-motivated communities, with fewer partisans sharing or discussing issues that hurt their preferred party.

Background

On Sept. 18, Time magazine published a photo of Prime Minister Justin Trudeau from a 2001 yearbook from the private school where Trudeau taught at the time.[21] The school had staged an Arabian Nights-themed gala and Trudeau had dressed as Aladdin, wearing a turban with his face darkened. By the following morning, more photos or videos had surfaced showing Trudeau in brownface or blackface on two other occasions, and the incidents became international news.

On Sept. 28, the Globe and Mail published the results from an investigation into Andrew Scheer's professional background that found he was not a licensed insurance broker.[22] When Scheer had run for the leadership of the Conservative party, the biographical information on his website had said he "passed the Canadian Accredited Insurance Broker program and began his working career in the insurance industry in Regina." Scheer admitted after the

21   Kambhampaty, A.P., Carlisle, M. and Chan, M. Sept. 19, 2019. Justin Trudeau Wore Brownface at 2001 'Arabian Nights' Party While He Taught at a Private School. Time.

22   Clark, C., and Radwanski, A. Oct. 16, 2019. Andrew Scheer, a work in progress: Where the Conservative Leader comes from and how he really thinks. The Globe and Mail.

story broke that he only worked in the industry for "six or seven months."[23] In part because of a lack of clarity by his office and his own statements, the story continued for several days and was picked up by outlets across the country.

These two stories represented intense personal scrutiny of the leaders of the two main parties during the election. We investigated their reach and duration during the election on Facebook and Twitter.

Emergence and decline of stories

The graphs below show the rapid emergence and decay of activity on the blackface and broker stories. First, we look at every tweet and Facebook post from tracked public groups and pages that contained hashtags or keywords associated with the blackface story (e.g. #brownface, #blackface). The density plot in **Figure 3.3.10** shows the explosion of scandal-related language just after the story broke on the evening of Sept. 18 (all times in UTC), and the subsequent flurry of discussion afterwards. Indeed, the number of tweets was highest just after the story broke, with less activity overnight and a rebound the next day. For comparison, we included general election-related posts as those that had a relatively stable density throughout the campaign. This mapping strongly suggests that the online discourse around the controversy declined dramatically by the third day on both platforms. The rapid decay of such an explosive story is worth noting. By one week after the story broke, there was very little general Twitter or Facebook interest in the story.
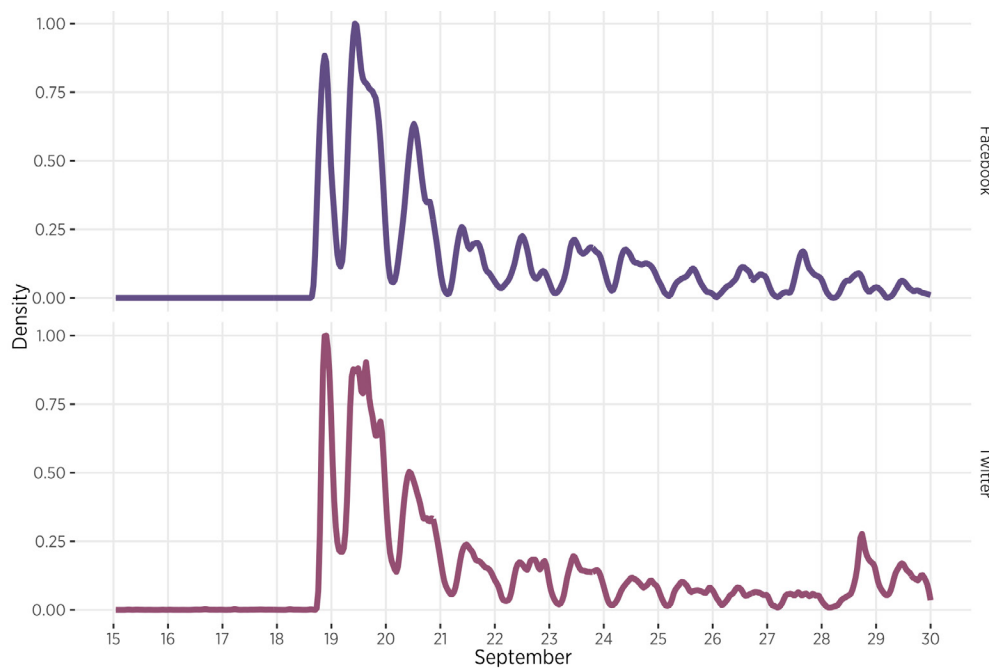

Figure 3.3.10. Scaled density plot of posts including a hashtag, URL or keywords for blackface-related content

23   McGregor, J. Sept. 30, 2019. Andrew Scheer's experience in the insurance industry: '6 or 7 months'. CBC News.

While the Scheer insurance story did not garner as much attention as the more explosive Trudeau blackface revelations, the story's engagement had similar dynamics, albeit one day delayed, as **Figure 3.3.11** shows. It was not until the day after the Globe and Mail story was released that the issue saw a massive spike in attention on Twitter, and two days after that it spiked on Facebook. The story then persisted for a similar three days on Twitter before conversation declined. On Facebook, however, the story endured for three days and then was not mentioned again across any of the groups we tracked. As shown in Chapter 3.2, Facebook engagement tends to be higher for Conservatives and Twitter for Liberals, so this might contribute to the overall lower level of attention paid on that platform.
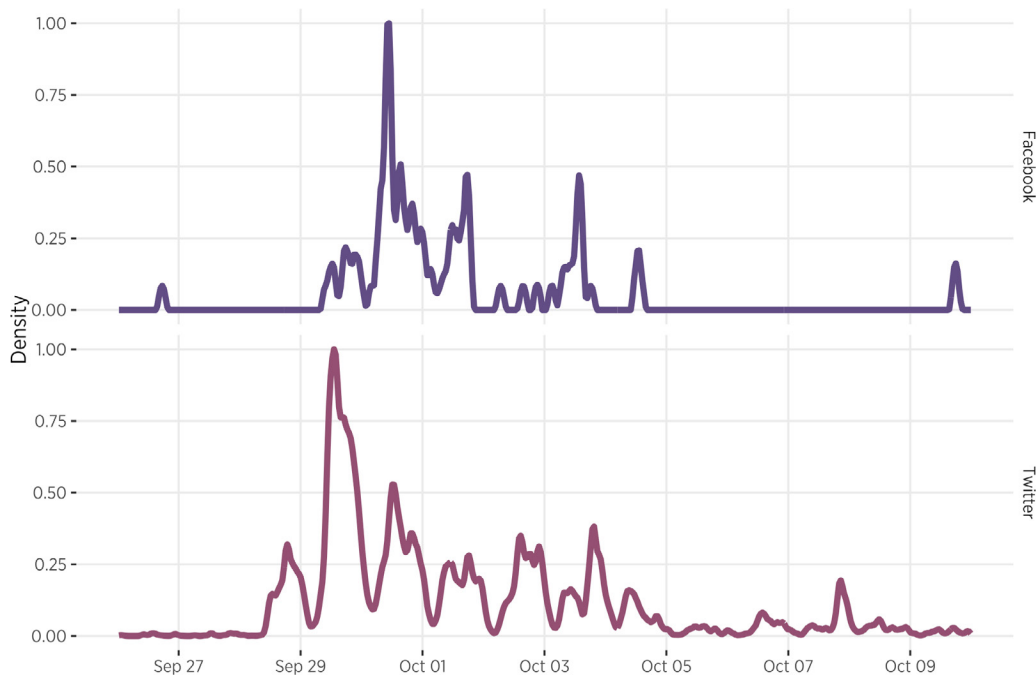

Figure 3.3.11. Scaled density plot of posts including a hashtag, URL or keywords for Scheer-related scandal content

While the Scheer story received a lot less attention overall, it provides another example of the rapid decay of interest among the general public, with the story dying down quite rapidly on social media.

While the public quickly lost interest in discussing these stories on Twitter, both journalists and political candidates may have had incentives to continue engaging with the stories on the platform. We collected all tweets from major-party candidates, and from hundreds of journalists and media outlets, that either (a) included the words "blackface" or "brownface" or related hashtags, or (b) linked to a story about the matter. We performed a similar analysis with the Scheer story. As with public Twitter users, news outlets and journalists demonstrated a similar spike in activity immediately after the stories broke, with a large decay in subsequent days. There is not a noticeable difference in the decay between journalists and the general public — their interest in the story waned at a similar pace.
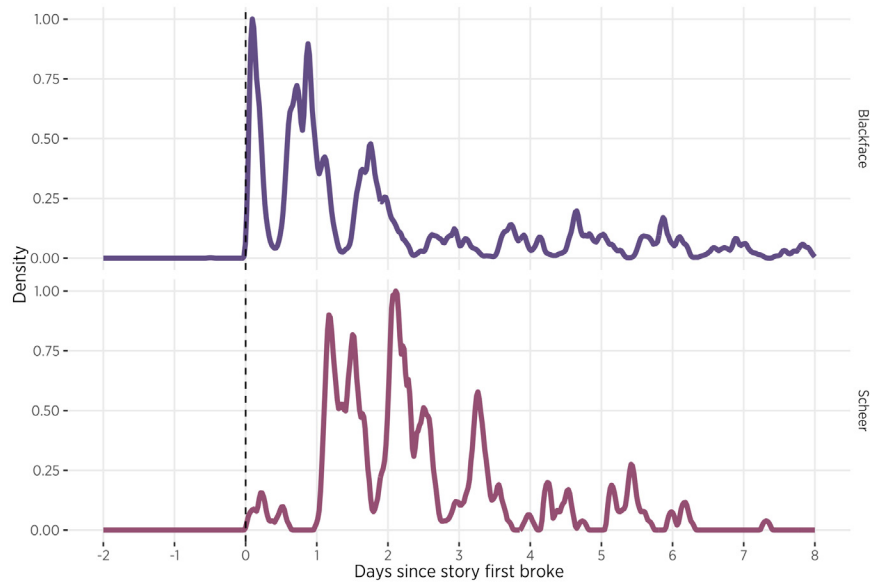
Figure 3.3.12. Density of posts by journalists and news outlets that include reference to scandal-related content

Candidates, on the other hand, may have had stronger incentives to keep both stories alive. However, like journalists and the general public, their tweets on these controversies also dwindled a few days after the stories broke. **Figure 3.3.13** shows the density of related posts by candidates and their affiliations. Here we see that the NDP, PPC, Conservative and Green candidates engaged the most on the blackface story, with Liberal and Bloc Québécois candidates having minimal engagement. Meanwhile PPC, Liberal and Green candidates engaged more heavily on the Scheer story.

Notably, not a single Conservative candidate tweeted about the Scheer story, and very few Liberals tweeted anything concerning the blackface story (although some candidates did retweet a defence of Trudeau by Calgary Mayor Naheed Nenshi and several comments concerning the source of the photo). As **Figure 3.3.14** shows clearly, the general public, candidates and journalists all showed similar patterns of a spike in interest in the story followed by a rapid decay.

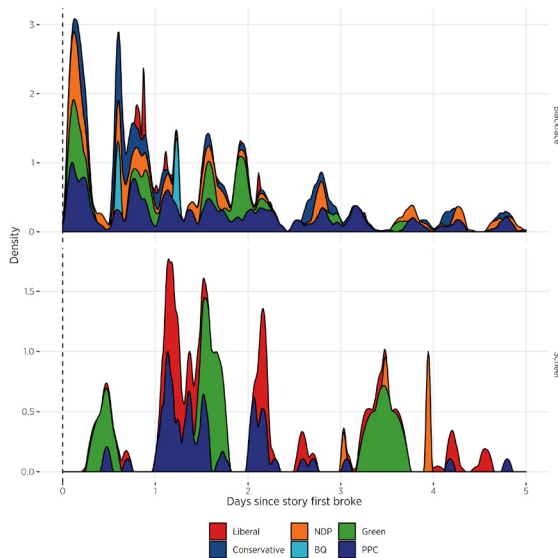**Figure 3.3.13.** Density of posts by candidates that include reference to scandal-related content for the blackface and Scheer scandals
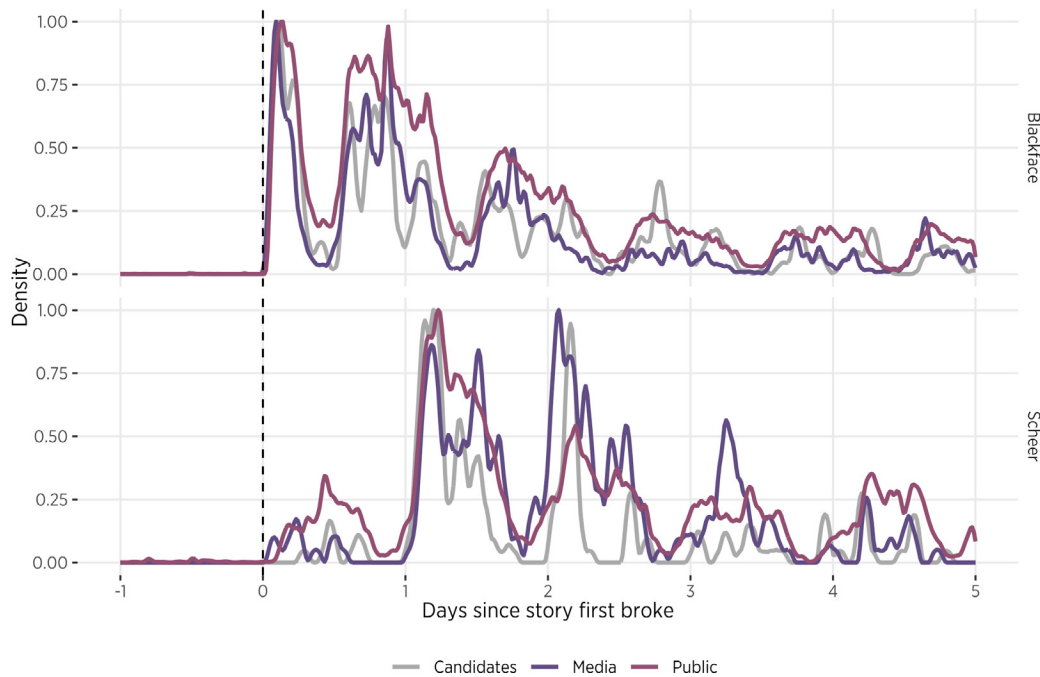
Figure 3.3.14. Density of posts by the mass public, journalists and candidates that include reference to the blackface and Scheer broker stories

Finding: Posts about both Trudeau and Scheer stories garnered a lot of attention initially, with two full days of discussion followed by a dramatic decline starting on Day 3. Journalists and news outlets, candidates and the public all showed similar levels of decline in interest.

Partisan isolation

A recurring theme in the broader report is that individuals are motivated to consume and share content that supports their preferred candidate, leader or party. To test whether these experiments and survey findings hold for scandal-related content, we examined the volume and subject of tweets at the time these stories broke to see if scandal-related discussions were isolated to particular partisan communities. We find that while discussion was not isolated, different partisan groups reacted very differently to the two stories and showed a strong propensity to favour discussion of opposing parties' scandals.

Figure 3.3.15 shows how the three major national parties reacted to the two stories. For blackface, the Liberals were far less likely to share information than Conservatives, whereas for the Scheer-related scandal the opposite was true. NDP supporters, meanwhile, did not pay as much attention to either issue.

Figure 3.3.15. Density of posts by Twitter partisans that include reference to scandal-related content for the blackface and Scheer scandals
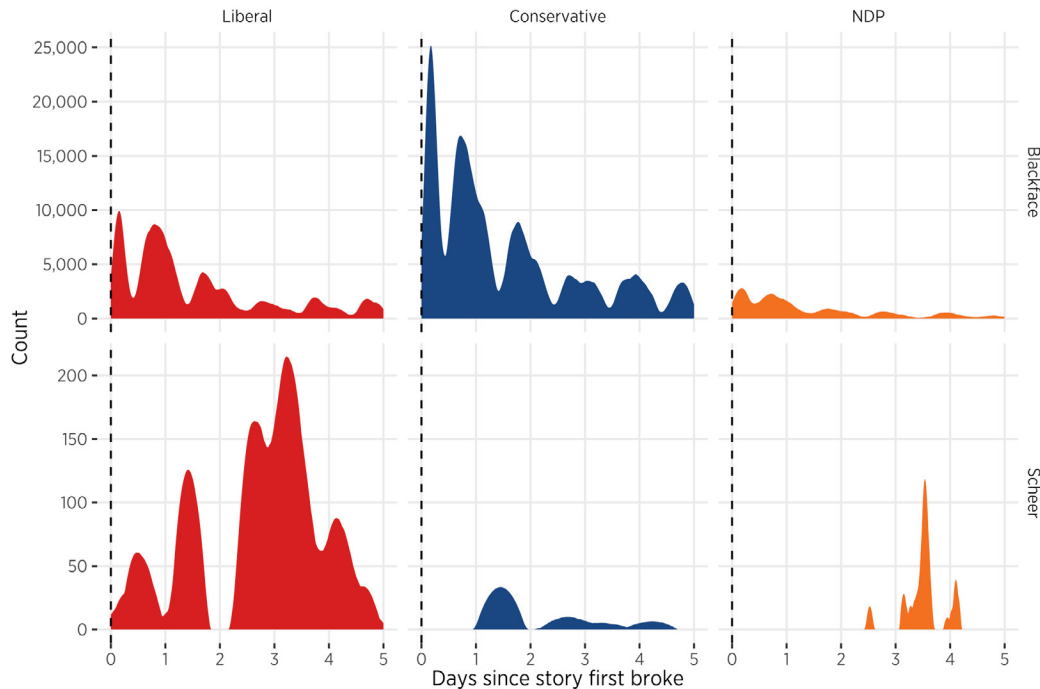
Finding: Partisan Twitter users are much more likely to discuss other parties' scandals and pay less attention to the scandals in their own party.

The Buffalo Chronicle and disinformation

Throughout the election, we looked actively for *disinformation*: false information related to political issues disseminated with the intent of misleading the Canadian public, disrupting public democratic dialogue and potentially affecting the outcome of the vote. Over the past four years, numerous countries have had their elections targeted by disinformation campaigns spread through digital platforms (e.g. U.S. 2016, Brexit referendum 2016, France 2017, India 2019). Canada's signals intelligence agency, the Communications Security Establishment, warned in an April 2019 report that it was "very likely" Canadian voters would encounter foreign adversaries trying to interfere in the election through the digital information environment.[24]

In January 2019, the Liberal government unveiled a series of measures aimed at better protecting Canada's electoral system against foreign interference and enhancing its ability to defend the democratic process from cyber threats and disinformation. It created an election-integrity task force called the Critical Election Incident Public Protocol, a five-person panel of senior bureaucrats tasked with sounding the alarm if a serious attempt to meddle

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24   Communications Security Establishment. 2019. 2019 Update: Cyber Threats to Canada's Democratic Process.

in the election by a foreign actor was detected. It also introduced the Elections Moderniza-
tion Act, which required social media companies to create registries of political advertise-
ments and banned them from selling election advertisements to foreign entities, among
other measures.

Political parties were also involved, with the Liberal, Conservative and NDP parties signing
a global election-integrity pledge in April 2019.[25] Signatories pledged to not "aid and abet
those who seek to undermine democracy," and committed to not fabricate, disseminate or
spread disinformation or propaganda.

In addition, several Canadian news organizations, including the CBC and Radio-Canada,
Global News, the National Observer and a Toronto Star-BuzzFeed News collaboration,
introduced new journalistic initiatives focused on disinformation. Civil society groups such
as the Canadian Journalism Foundation and CIVIX also rolled out digital literacy campaigns
designed to help members of the public recognize false or misleading information online.

Finally, civil society groups, academics and private citizens monitored, reported on and
discussed disinformation throughout the election. We cannot know if disinformation would
have played a larger role in the Canadian election had these efforts from a cross-section of
society not been undertaken.

Our finding is that disinformation did not play a major role in the 2019 Canadian election
campaign. This is consistent with the findings of many other investigations by journalists,
academics, government agencies and officials, and the private sector. That is not to say
there were no instances of disinformation, but what there was generally did not appear
co-ordinated and had limited impact.

A notable exception
involved online rumours
that Trudeau was fired from
a Vancouver private school
for sexual impropriety, and

> *" OUR FINDING IS THAT DISINFORMATION DID NOT PLAY A MAJOR ROLE IN THE 2019 CANADIAN ELECTION CAMPAIGN"*

that the Globe and Mail was prevented from running a story about it by a court injunction.
Journalists had reportedly been investigating the rumours for weeks without finding any
truth to them.[26] At a campaign event on Oct. 4, Globe and Mail reporter Marieke Walsh
asked Trudeau about "unfounded rumours" surrounding his departure from the West Point
Grey Academy and whether he signed a non-disclosure agreement with the school. Trudeau
said no. The AFP Fact Check unit mapped key points in the rumour's trajectory from there:[27]

- On Oct. 4, political commentator and former Liberal strategist Warren Kinsella hinted on
  Twitter that the Globe would be running a story about the affair the next day.

25   The Pledge for Election Integrity. Undated. https://electionpledge.org
26   Oved, M.C. Oct. 9, 2019. Anatomy of a manufactured election scandal. Toronto Star.
27   Baudoin-Laarman, L. Oct. 9, 2019. Canada's national newspaper was not barred from publishing a scandal involving PM Trudeau. AFP.

- A few hours later, blogger James Di Fiore tweeted that "the media" was suppressing a story about Trudeau sleeping with a teenage student. He also wrote a post about the rumours for his BlackBall Media blog on Oct. 5.
- On Oct. 7, the Conservative party issued a press release questioning why Trudeau left the school.
- Also on Oct. 7, the Buffalo Chronicle, an American news site with a reputation for publishing baseless or false stories about Canadian politics, wrote without evidence that Trudeau was negotiating with a former student to keep the allegations quiet.

We mapped the growth of the story on Facebook and on Twitter, focusing both on general discourse about the rumours and the specific stories reporting the rumours as fact. While the spread of the rumours has been already reported upon extensively, a more detailed look at the data can help us understand what this form of disinformation looks like and help prepare for future occurrences.
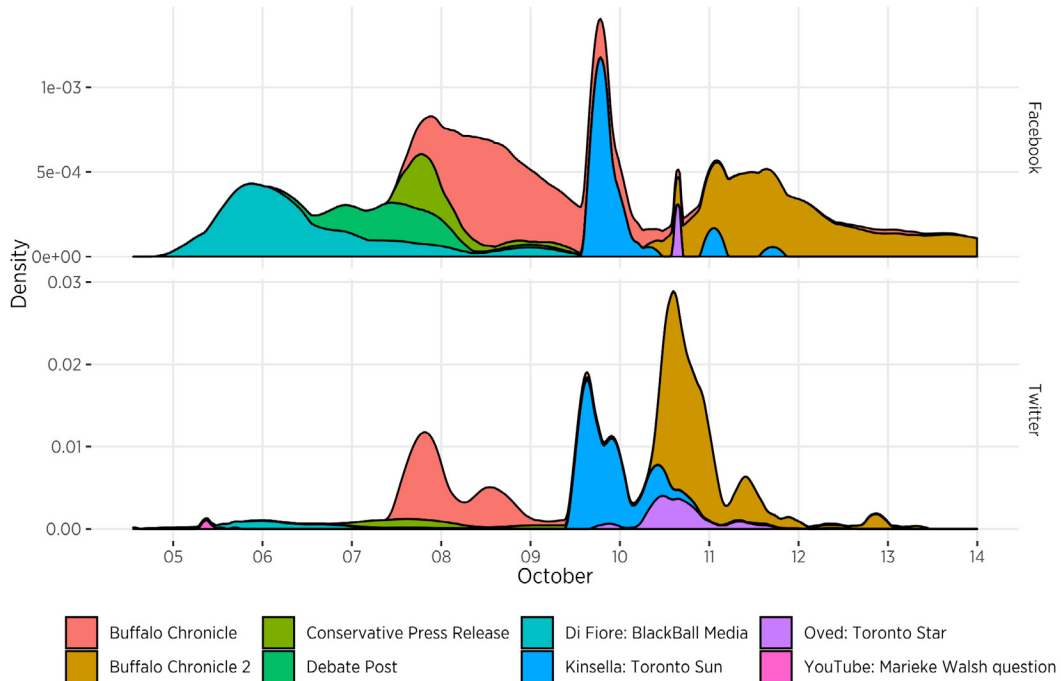
Figure 3.3.16. Shares on Facebook and Twitter of stories associated with the rumours

First, we look at the extent to which stories that propagated the rumour were shared on social media. **Figure 3.3.16** shows the density of users who shared eight of these links on Facebook and Twitter. These are a selection of the links that drew attention online and played a key role in the propagation of the story but not a comprehensive list. The first link shown is the YouTube livestream during which Walsh asked Trudeau about the rumours.[28] The second is Di Fiore's BlackBall Media blog post from Oct. 5.[29] Also on Oct. 5, the Debate Post blog published a short post questioning whether Trudeau had obtained an injunction to prevent

28   CPAC. Oct. 4, 2019. Justin Trudeau Campaigns in Quebec City. YouTube.
29   Di Fiore, J. Oct. 5, 2019. Justin Trudeau bombshell rumours a symptom of bad faith journalism. BlackBall Media.

the Globe and Mail from publishing the story.[30] The reach of the story widened massively on Oct. 7, with the Conservative party news release, the Buffalo Chronicle story,[31] and a blog post by Kinsella.[32] Many accounts that shared the story claimed there was a coverup in Canadian media circles, which explained why an American publication was the first outlet to run with the story. In his Toronto Sun column on Oct. 9, Kinsella defended what he perceived as his journalistic responsibility to investigate the rumours about Trudeau.[33] Also on Oct. 9, the Toronto Star reported a timeline of the scandal.[34] The Buffalo Chronicle published a second story on Oct. 10 and received even more widespread attention.[35]

On Facebook, these stories received more attention and much earlier than on Twitter. Di Fiore's BlackBall post in particular garnered many more views on Facebook.

It is also useful to compare these stories to other popularly shared stories over the same time period. **Figure 3.3.17** shows the density distribution of three of these stories compared to three popular stories shared on Twitter: a BBC article on Scheer's American citizenship,[36] a Toronto Sun article on polling indicating low support for Trudeau,[37] and an article about Liberal candidate Jaime Battiste's social media post history from the CBC News website.[38] The Buffalo Chronicle stories were shared in numbers comparable to top mainstream stories.
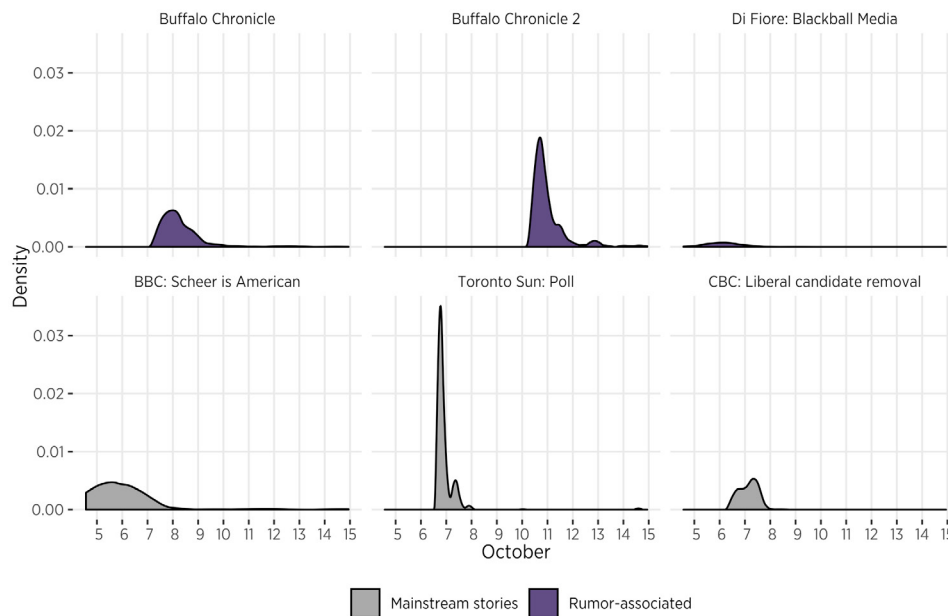
Figure 3.3.17. Shares on Twitter of stories associated with the rumours as compared to mainstream stories circulated at the same time

30   Debate Post. Oct. 5, 2019. Did Trudeau Sleep With A 17-Year-Old? Here's When The Story Will Break.
31   The Buffalo Chronicle. Oct. 7, 2019. Trudeau is rumored to be in talks with an accusor to suppress an explosive sex scandal.
32   Kinsella, W. Oct. 7, 2019. Why Did Justin Trudeau Abruptly Leave That School Mid-term? warrenkinsella.com
33   Kinsella, W. Oct. 9, 2019. Kinsella: Rumours, the truth and Trudeau. Toronto Sun.
34   Oved, M.C. Oct. 9, 2019. Anatomy of a manufactured election scandal. Toronto Star.
35   The Buffalo Chronicle. Oct. 10, 2019. Trudeau accusor lands a seven-figure NDA to keep quiet about West Grey departure.
36   BBC News. Oct. 4, 2019. Could an American be Canada's next prime minister?
37   Lilley, B. Oct. 6, 2019. POLL: Only 25% think Trudeau should get a second term. Toronto Sun.
38   The Canadian Press. Oct. 6, 2019. Trudeau won't remove Liberal candidate for racist, sexist social media posts. CBC News.

A website that develops an unusual sharing pattern can indicate it merits further scrutiny. To illustrate just how unusual the Buffalo Chronicle's sudden prominence was, we examined its social media history over several months and compared it to other news sites in Canada (four small news sites that received little attention throughout the campaign and three large mainstream news sites). **Figure 3.3.18** shows the distribution of Twitter and Facebook posts that linked to stories from these outlets before, during and after the election period, with the dashed lines indicating the writ period. The two Buffalo Chronicle stories show a massive spike for the outlet on both Twitter and Facebook, followed and preceded by almost no attention. Any story that receives such a massively disproportionate amount of attention is worth looking at. This type of activity can be monitored and flagged when a site suddenly receives unexpected attention.
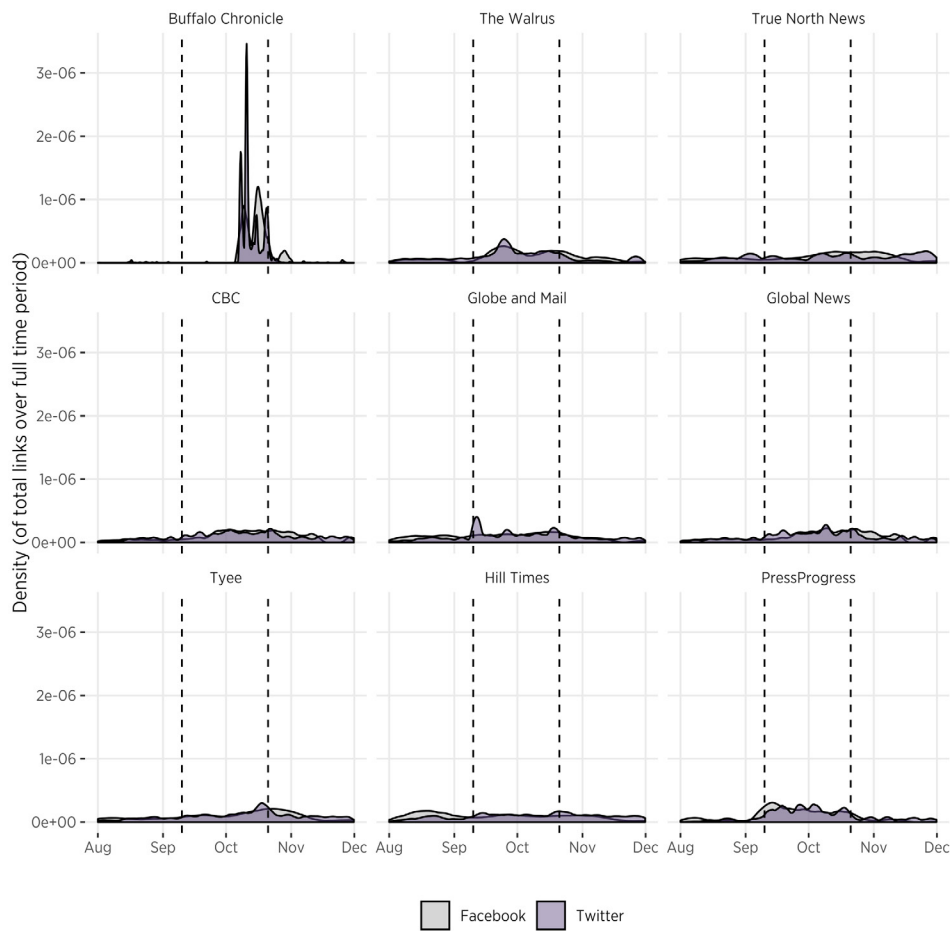
Figure 3.3.18. Density of link patterns to news sites from Canadian politics on Twitter and Facebook pages and groups before, during and after the election

An alternative view is found in **Figure 3.3.19**, with the densities scaled to one for each individual news site. The Buffalo Chronicle pattern looks similar to the previous version, but the other outlets show a range of sharing patterns on Facebook and Twitter. Variation is expected and can be accounted for, but the Buffalo Chronicle behaviour is far outside any uniform distribution.
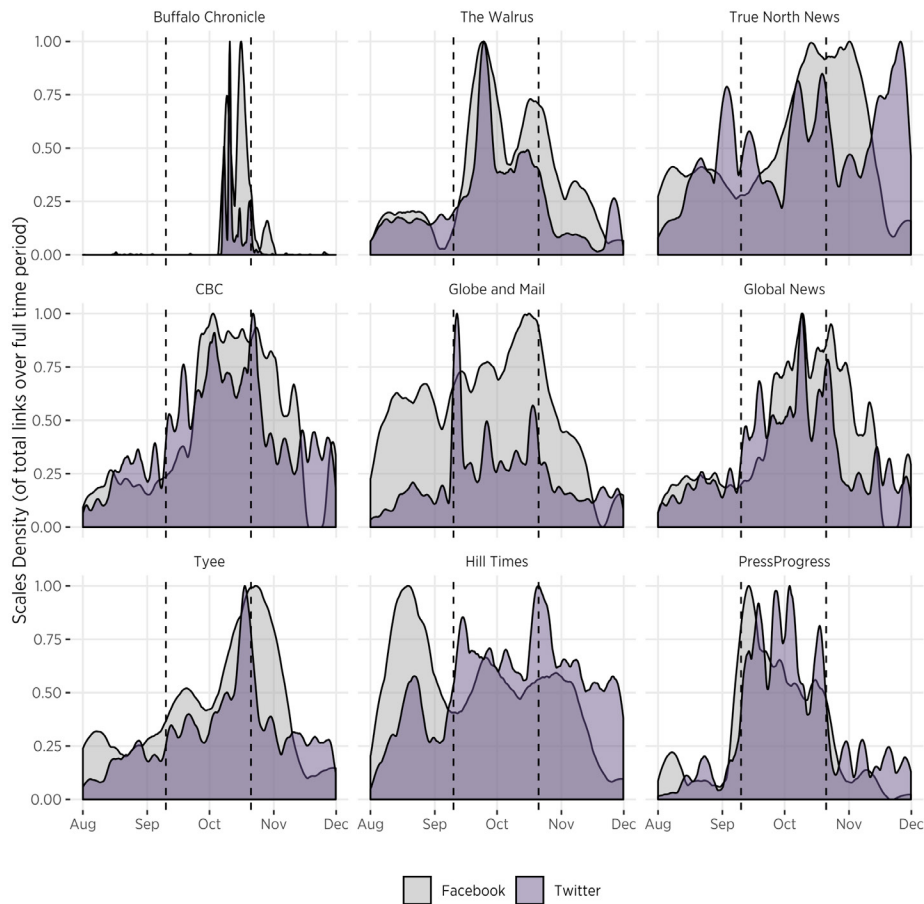
Figure 3.3.19. Density of link patterns to news sites from Canadian politics on Twitter and Facebook pages and groups before, during, and after the election, scaled per outlet

Unusual engagement patterns are not enough on their own to indicate a story or outlet is unreliable, so we also looked at the extent to which the Buffalo Chronicle's story was repeated by traditional news organizations. For example, the blackface story was initially reported by Time magazine, which had previously received little attention from Canadian political Twitter users, however, major Canadian news outlets immediately began to match the story. Meanwhile, the Buffalo Chronicle story was predominantly covered in blog posts, YouTube videos, and news sites with no real contact information listing, a strong indicator of an unreliable source.

Finally, we investigated links to pages or news sites that propagated these rumours in the metered data we collected and found that only two out of 754 had directly visited a page that described the rumour — one visiting the Buffalo Chronicle and one visiting BlackBall Media. While this story was heavily discussed on social media, it appears that only a very small selection of Canadians were directly exposed to the rumours.

4. LIMITATIONS AND REFLECTIONS

As a team, we have spent the past year developing a methodology for studying the Canadian media ecosystem during an election. This work builds on the growing field of study of election integrity and, in particular, on the spread and influence of media exposure (both online and offline) and of disinformation and toxic content on the behaviour of voters. We offer the following reflections about our findings and our methodology as a way of contributing to the wider global conversation.

Public policy

While it is impossible to directly measure the impact of particular public policies in this space, Canada had the benefit of learning from the vulnerabilities in the digital ecosystem seen in preceding elections in other jurisdictions. Since the 2016 U.S. presidential elections and U.K. Brexit referendum, a number of countries have sought to minimize the possibility of foreign interference and domestic disinformation campaigns that leverage the tools of the digital infrastructure to influence the behaviour of voters. Canadian policy makers took these potential vulnerabilities seriously, introducing the Elections Modernization Act, as well as a number of additional initiatives to attempt to address some of the key weaknesses seen in other jurisdictions. In particular, the government:

- limited spending leading up to the election;
- banned advocacy groups from using money from foreign entities to conduct partisan campaigns;

- mandated an online ad registry for all internet platforms selling political and issue ads;

- made it illegal to impersonate or share false information about a candidate;

- and created a five-person panel of senior bureaucrats tasked with sounding the alarm if a serious attempt to meddle in the election by a foreign actor was detected.

It is very possible and even likely that these policy initiatives helped keep bad actors from taking advantage of the "low hanging fruit" of election interference.

Our election monitoring methodology

All of the findings in this report must be understood in the context of the limitations of these kinds of large-scale media ecosystem studies in general, and the challenges of empirically studying disinformation and media manipulation more specifically. For our study, we relied on three primary data collection streams: a weekly national survey; a metered sample of internet users who voluntarily provided their browsing data; and large-scale online data collection through digital platforms' pipelines (application programming interfaces, or APIs, which allow one to collect data in a structured, machine-readable way). While we believe this method of combining survey data and online monitoring revealed some important insights into the election and holds real potential as a methodology for studying election integrity, we faced multiple significant limitations.

Our largest set of challenges was in obtaining consistent access to the APIs needed for large-scale data collection from social networks such as Facebook, Instagram, Twitter and YouTube. These companies have in the past few years severely restricted the access that researchers have to reliable streams of data, leading to what some scholars have called an "APIcalypse" or "post-API" age[1] that has made it increasingly untenable for computational social science research with platform data.

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1   Bruns, A. 2019. After the 'APIcalypse': social media platforms and their fight against critical scholarly research. Information, Communication & Society, 22(11), 1544-1566; Freelon, D. 2018. Computational Research in the Post-API Age. Political Communication, 35(4), 665-668.

Facebook

Facebook provides only a limited Public Feed API and Graph API to members of the public. Facebook did provide us with additional access from their Crowdtangle content monitoring tool, which allows monitoring of public groups and pages with information on engagement metrics, post content, account information, links shared and several other fields. However, we needed to know that a particular group or page existed in order to add it to a curated list that we could follow. We were also able to query what URL links were posted to public pages and groups and associated reactions.

Comments, reactions, private content and non-public groups all remained off limits, even in anonymized and privacy-preserving formats (for example, bulk lists of top URL shares would provide a snapshot of the types of information that were circulating amongst the electorate). Moreover, gaining access to these private groups would involve identifying and following thousands of groups, which presents a costly barrier for smaller research teams wanting to enter this space. While there are admittedly many complexities and sensitivities with sharing these types of data, the reality is that datasets with tremendous public value remain solely in the hands of private-sector companies.[2]

We were able to collect some information on advertising through the newly established Facebook Ad Library API. The API provides more visibility into the top political advertisements circulating on Facebook in Canada than was previously available.[3] However, the limited information on targeting and broad spending categories is a major limitation that prevents more granular insights.

Given the broad use of Facebook by a major portion of the Canadian population, the general lack of data created a significant blind spot, severely limiting the scope of the questions we were able to ask in this project.

Twitter

We used an ever-evolving number of different methods to access Twitter data. Our project used the publicly available Search and Timeline APIs to collect tweets from the timelines of 2,610 candidates, journalists, third parties and other types of political elites, as well as tweets from 274 political hashtags. We also used the Account Activity API to collect all the followers of each candidate at various points during the election. Fields available included information on both the user (e.g. location, number of followers, number followed, profile description, etc.) and the tweets themselves (text, URL links, number of likes, time created, etc.).

The Search API cannot provide certain types of data (e.g. replies to specific users), but is rate-limited and curbs the collection of more computationally intensive types of data (e.g. a list of all those followed by specific users, essential for understanding online network struc-

2   King, G., and Persily, N. Aug. 19, 2019. A New Model for Industry-Academic Partnerships. PS: Political Science & Politics, 1-7.
3   For more information on Canadian election advertising on Facebook, see our report: Digital Democracy Project. October 2019. DDP Research Memo #6: Political Advertising.

tures). It also has long been critiqued for its potential sampling bias, providing a semi-random, rather than purely random, sample of up to 1% of Twitter activity.[4] Thus we intended to supplement the Search API with PowerTrack, a proprietary data collection product sold by Twitter. This product collects a complete collection of tweets (available at the time of collection) as a batch job corresponding to a Search API query and allows a more comprehensive view into mentions and retweets, among other things. We tried for five months to get PowerTrack and are hoping to receive these data soon, but the process was delayed due to the complexity of the application process and query development. This limited important real-time analysis into, for example, the level of toxic language or speech directed at journalists or candidates running for office.

Other platforms

YouTube and Google are difficult to study as well. Ads run on both are almost impossible to collect in a systematic manner, given that Google declined to create an Ad Archive as mandated under the Elections Modernization Act.

Instagram's API has been discontinued and effectively no data is available.

We collected approximately 128,000 Reddit posts across 181 Canadian subreddits, along with associated comments, using the Reddit API. Some posts were deleted before we could obtain them and the dataset will eventually be augmented using the Pushshift API.

We were also interested in collecting data on peer-to-peer messaging services, such as WhatsApp, which along with closed Facebook groups, have been implicated in Brazil, India and other contexts as important channels through which disinformation can be spread. However, these groups pose major technical and ethical data collection issues for researchers, not least due to their use of end-to-end encryption.[5] There is no current way for researchers to access privacy-preserving datasets (for example, data on top URLs and the most forwarded content) that could provide a better idea of activity on these networks.

Monitoring news organizations' websites also presented a set of unique challenges, with each site displaying features to combat the automatic or semi-automatic collection of its content. While there are good reasons for media companies to protect their content from online scraping, there is also a public value in authoritative datasets of web, print and broadcast media published during an election period. A number of private entities provide some access to this kind of data, but their coverage is limited and often they are prohibitively expensive for academics.

Data sharing

Platforms' terms of service place strict limitations on how collected data can be shared with others. While this is understandable given privacy concerns, this means that even the least

4   Gonzales-Bailon, S., et al. 2014. Assessing the bias in samples of large online networks. Social Networks, 38, 16-27.
5   Resende, G., et al. May 2019. (Mis)Information Dissemination in WhatsApp: Gathering, Analyzing and Countermeasures. The World Wide Web Conference, 818–828.

sensitive datasets of publicly available Twitter data are generally not able to be shared with other researchers, even those who have received ethics clearance to use the data responsibly in their research. We sought to share some of our data with other research teams across Canada, in order to increase our analytic capacity, increase the diversity of electoral issues being scrutinized (e.g. Indigenous activism and issues on social media; abuse faced by |refugees and other marginalized groups), and help offset costs for smaller teams that lack the infrastructure or technical capabilities to collect large quantities of online data themselves. Twitter insists, however, that datasets not be shared (rather only Tweet IDs, which provide a cumbersome way for publicly available parts of the dataset to be reconstituted by savvy users), making replication studies significantly more difficult.[6] This issue has begun to attract attention from regulators, especially in Europe, spurred in part by concerns about the inability to produce reputable research to assess the real impact and threat of disinformation.[7] A growing conversation is building around the importance of creating robust mechanisms for data access and sharing among academic teams for publicly valuable research under certain ethical and privacy-preserving constraints.[8]

Survey work

We sought to contextualize our online data collection with survey data, which provided numerous helpful insights. However, it is limited by two factors. First, the number of Canadians who agree to be members of survey panels where respondents are paid or otherwise compensated for their participation is probably shrinking. This increases the risk of unrepresentative inferences from survey data. Second, surveys rely on self-reporting, which is less than ideal for getting the most accurate picture of respondent behaviour during an election. Individuals cannot always remember which media they have consumed, and sometimes misreport what they consume for social desirability reasons. As a result, so-called "metered" samples of internet browsing histories (where survey respondents install an app or browser extension that tracks, with consent, all of their activity) are a particularly promising tool for studying online behaviour. However, as we experienced first hand, the product is scarce and expensive. The company that we employed to provide this data ultimately delivered less than 50% of the sample size that had been contractually stipulated.

We strongly believe further development and testing of this model is needed. But without these data, our ability to make inferences about the impact of media exposure on voting preferences and behaviour (already a difficult and contentious exercise) was seriously curtailed.

Despite all of these issues, we still see fundamental value in bringing together survey researchers with data scientists to study mis- and disinformation. We believe there are considerable methodological advances to be made through such collaboration, and intend to adapt and extend it on an ongoing basis for non-election periods.

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6   Freelon, D. 2018. Computational Research in the Post-API Age. Political Communication, 35(4), 665-668.
7   Rabbachin, A. March 21, 2019. Tackling Online Disinformation: A European Approach. European Commission.
8   Puschmann, C. 2019. An end to the wild west of social media research: A response to Axel Bruns. Information, Communication & Society, 22:11, 1582-1589.

The news media

This project has sought to engage with and collaborate with journalists from the outset. It was a core premise of our research that journalists bring a critical tool set for understanding disinformation, and that better collaboration between journalists doing that work and researchers contributing additional analytic focus would be valuable.

Our work with journalists had two components. First, before and during the election, we hoped to encourage media organizations to hire dedicated disinformation reporters, and to collaborate with one another. Several news outlets, including the CBC, Radio-Canada, BuzzFeed News, the Toronto Star, Global News and the National Observer, created disinformation beats or reporting projects ahead of the election. We hosted a two-day workshop for journalists where we brought in global leaders in the study and reporting of disinformation during elections. The result of these efforts, and those of many others, was the standup of a capacity in the Canadian media ecosystem to find and understand disinformation campaigns. This may have provided a disincentive for disinformation actors to conduct this activity.

While there were real benefits to this capacity, we also observed a negative corollary. While it was very important that journalistic capacity for reporting on disinformation was scaled up prior to the election, this could have created an incentive to find examples of it. Journalism requires news, and the lack of a problem is a more difficult story to tell. Ultimately, disinformation reporting in an election is a public good, and the presence of journalists in this space plays an important disincentivizing and accountability role. In this case, the absence of news is good news for our democracy.

Second, we hoped to collaborate with journalists on their investigations. We believe that investigative journalists and academic researchers bring different types of analytic capacities

> *" WE BELIEVE IT IS CRITICAL TO THE INTEGRITY OF THE EFFORTS OF BOTH COMMUNITIES THAT THEY WORK MORE CLOSELY TOGETHER"*

to understanding this problem and would benefit from collaboration. These types of journalist-academic collaborations are difficult. Journalists are rightly protective of their methods and stories and have very tight timelines. Academics have limited capacity and are often not nimble enough to respond to the immediacy and pace of news cycles. That said, we believe it is critical to the integrity of the efforts of both communities that they work more closely together. In that vein, the project would have also benefited from a fact-checking network such as CrossCheck[9] which could provide a trusted pipeline of mis/disinformation URLs for us to study. While we tried to establish such a network, there was not sufficient interest by the Canadian media.

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9   First Draft. Sept. 12, 2019. CrossCheck: Together, Now.

In effect, we observed some real tensions between the twin mandates of our project: conducting academically rigorous analysis and communicating regular findings to journalists and the public. Our research design was stretched by providing weekly briefings to journalists, and this type of real-time monitoring demands a far larger data-analysis team than that of scholars taking a longer-term and more scientifically oriented research approach. Ultimately, the truth is that large-scale disinformation/misinformation analysis in real time may not be feasible given current data availability and tools unless enormous resources are put into labour and, even then, the quality of the analysis is likely to be compromised. The sharing of open-source tools and far better data access would go a long way to addressing this problem.

Lessons for other elections

Finally, we take some broad lessons from the work. First, we believe there is clear value in this methodology, but it needs iteration and large-scale trials, both in Canada and internationally as well as during elections and outside of them.

> **"WE ARE STILL ONLY SCRATCHING THE SURFACE ON HOW TO UNDERSTAND THE ROLE DIGITAL INFORMATION PLAYS IN THE ELECTION"**

Second, due to the data-gathering and methodological limitations described above, we are still only scratching the surface on how to understand the role digital information plays in the election. While there is a clear opportunity for new methods, institutional arrangements and policies in this space, solving these problems will be no easy task — as evidenced through the challenges faced by institutional efforts to create more reliable channels of academic access to platform data, such as the Social Science One initiative.

The absence of robust open-source frameworks and tools for this work has become a real problem in the interlinked research, journalistic and policy communities. In effect, every project or investigation building a monitoring infrastructure must do so from the ground up, applying different methods and piecemeal datasets, leading to limited comparability and reproducibility across studies and contexts. Developing an open suite of tools, along with better APIs for research, should be a priority, and policy solutions that seek to incentivize mechanisms for ethical, reproducible and privacy-preserving research may well be necessary.

Going forward, we would continue to ask: How can we ensure far greater data access? How can we scale these efforts to function outside of elections? How can we deal with private online spaces? And how can the methodology evolve to better capture change and behavioural impact?

APPENDIX A

Table 2.1. Predicted effects on media trust (0-100)

Variable	Difference
Generalized Trust (100-0)	21.5***
Particularized Trust (100-0)	-2.1
Internal Efficacy (100-0)	0.1
External Efficacy (100-0)	35.2***
Political Interest (10-0)	5.9*
Political Knowledge (High-Low)	-5.8***
Partisan Strength (Strong-None)	2.6
Ideological Extremity (Extreme-Moderate)	-2.1
Partisanship (Right-Left)	-5.2***
Ideology (Right-Left)	-1.8

Note: Model also controlling for gender, education, age, and region. Statistically significant differences indicated with *p<0.1, **p<0.05, ***p<0.01.

Table 2.2.1. Predicted effects on number of correct and incorrect responses

	Correct	Incorrect	Net
News Exposure (High-Low)	0.98***	1.16***	-0.19
General Political Knowledge (High-Low)	0.88***	-0.72***	1.60
Political Interest (High-Low)	0.22	0.21	0.01
Partisan Strength (Strong-None)	0.31	0.29	0.02
Ideological Extremity (Extreme-Moderate)	-0.24	0.05	-0.29

Note: Model also controlling for partisanship, ideology, gender, education, age, and region. Statistically significant differences indicated with *p<0.1, **p<0.05, ***p<0.01.

Table 2.2.2. Predicted effects on political discussion and participation

	Discussion	Participation
Internal Efficacy (100-0)	9.6***	13.4***
External Efficacy (100-0)	1.5	2.4
Political Interest (High-Low)	16.7***	5.8*
Political Knowledge (High-Low)	-0.2	-1.7
News Exposure (High-Low)	34.7***	29.4***
Partisan strength (Strong-None)	2.7	2.6
Ideological extremity (Extreme-Moderate)	3.1	2.4

Note: Model also controlling for partisanship, ideology, gender, education, age, and region. Statistically significant differences indicated with *p<0.1, **p<0.05, ***p<0.01.

Table 2.3. Predicted effects on fact-checking support

	Effect on Fact-checking Support (0-1)
Media Trust	+0.17***
Political Knowledge	+0.08***
Political Interest	+0.07**
News Exposure	+0.02
Partisan Media	-0.07***
Partisanship	-0.02
Ideology	-0.08***
Partisan Strength	-0.01
Ideological Extremity	+0.03

Note: Model also controlling for gender, education, age, and region. Statistically significant differences indicated with *p<0.1, **p<0.05, ***p<0.01.

Table 2.4. Predicted effects on affective polarization

	Out-group Feelings			Polarization		
	Warmth	Net Affect	Social Distance	Warmth	Net Affect	Social Distance
Political Knowledge (High vs. Low)	-5.0***	-0.5	-3.8*	1.5	1.2	3.6**
Political Interest (High vs. Low)	0.3	-1.0	-5.9***	7.8***	10.1***	-0.4
News Exposure (High vs. Low)	14.6***	8.8***	10.7***	-10.1***	-15.0***	-2.2
Partisan Media Exposure (High vs. Low)	0.1	-1.0	10.1***	-1.5	-0.1	4.2***
Perceived Out-group Party Ideological Extremity (Extreme vs. Moderate)	-29.9***	-21.4***	10.5***	39.5***	26.9***	14.3***
Ideological Consistency (High vs. Low)	-18.3***	-17.0***	12.6***	19.8***	22.2***	21.4***
Ideological Extremity (Extreme vs. Moderate)	-3.2**	-4.2***	9.1***	8.5***	8.6***	9.8***
Partisan Strength (Strong vs. Weak)	-15.4***	-6.8***	12.3***	34.5***	18.3***	9.7***

Note: *p<0.1, **p<0.05, ***p<0.01. Table shows the predicted effects of going from the minimum to the maximum for each variable on feelings towards the outgroup party, and on the overall gap in feelings between the in-group and out-group party using each of your three measures of affective polarization.

Table 2.5. Predicted Effects on Partisan-Congenial Media Diet

	Partisan-congenial Media Diet (0-100)
Political Knowledge (High-Low)	-2.6***
Political Interest (High-Low)	4.9***
Ideological Extremity (Extreme-Moderate)	2.1***
Partisan strength (Strong-None)	3.1***
Ideology (Right-Left)	5.7***
Partisanship (Right-Left)	2.4***

Note: Model also controlling for gender, education, age, and region. Statistically significant differences indicated with *p<0.1, **p<0.05, ***p<0.01.

Table 2.6.1 Predicted effects on the number of correct and incorrect responses

	Relative (Wave 1)			Absolute (Wave 4)			Perceptions (Wave 4)		
	Correct	Incorrect	Net	Correct	Incorrect	Net	Correct	Incorrect	Net
Knowledge (High-Low)	0.42***	-0.16**	0.58***	0.22***	0.13	0.09	0.22**	-0.16*	0.38**
Political Interest (High-Low)	-0.01	-0.03	0.01	0.23***	0.01	0.22	0.43***	-0.28***	0.71**
News Exposure (High-Low)	0.11	0.41***	-0.31**	0.20**	0.63***	-0.43***	-0.02	0.18*	-0.15
MIP (Yes-No)	0.22**	-0.01	0.23*	0.04	0.23***	-0.19*	-0.44***	0.43***	-0.87***
Partisanship (Right-Left)	0.04	0.00	0.04	0.11**	0.03	0.09	-0.29***	0.21***	-0.51***
Ideology (Right-Left)	0.24*	-0.07	0.32*	-0.04	0.05	-0.08	-0.48***	0.35***	-0.82***
Immigration Knowledge (High-Low)							0.03	-0.25***	0.28*

Note: MIP = Most Important Issue; Model also controlling for gender, education, age, and region. Statistically significant differences indicated with *p<0.1, **p<0.05, ***p<0.01.

Table 2.6.2. Predicted effects on populist scale

	Effect on Populism (0-100)
Political Knowledge (High-Low)	3
Political Interest (High-Low)	3
News Exposure (High-Low)	-6**
Partisan Media (High-Low)	-1
Partisanship (Right-Left)	-1
Ideology (Right-Left)	2
Strength of Partisanship (Strong-None)	7**
Ideological Extremity (Extreme-Moderate)	5***
Economic Evaluations (Worse-Better)	13***
Personal Finances (Worse-Better)	7***

Note: Model also controlling for gender, education, age, and region. Statistically significant differences indicated with *p<0.1, **p<0.05, ***p<0.01.

Table 2.6.3. Predicted effects on economic and cultural nativism

	Effect on Economic Nativism (0-1)	Effect on Cultural Nativism (0-1)
Populism (High-Low)	0.08**	0.19***
Factual Immigration Knowledge (High-Low)	-0.04*	0.00
Political Knowledge (High-Low)	-0.10***	0.00
Political Interest (High-Low)	-0.04	-0.09***
News Exposure (High-Low)	0.11***	-0.02
Partisan Media (High-Low)	-0.04	0.03
Partisanship (Right-Left)	0.04**	0.04***
Ideology (Right-Left)	0.10***	0.15***
Economic Evaluations (Worse-Better)	0.05**	0.06***
Personal Finances (Worse-Better)	0.01	0.01

Note: Model also controlling for gender, education, age, and region. The model for economic nativism controls for cultural nativism, and vice versa. Statistically significant differences indicated with *p<0.1, **p<0.05, ***p<0.01.

APPENDIX B

2.5 Echo Chambers:
Exposure of messaging on environment, immigration, and candidate

Environment

Cross	The Canadian population is so small relative to that of India and China that any effort we make to reduce emissions won't matter at all and may hurt our economy. On the other hand, Canada has been a major global polluter for decades and we cannot push the costs of that activity on to other countries. What should we do?
Right	The Canadian population is so small relative to that of India and China that any effort we make to reduce emissions won't matter at all and may hurt our economy. We need to stop trying to fix something that we can't.
Left	Canada has been a major global polluter for decades and we cannot push the costs of that activity on to other countries. We need to show some climate leadership.

Then the following were measured:

- The Canadian government should abolish the carbon tax. (Agree strongly to disagree strongly)

- The Canadian government should provide subsidies for renewable energy. (Agree strongly to disagree strongly)

- How likely would you be to sign a petition calling for Canada to meet its Paris Accords? (Very unlikely to very likely)

Immigration

Cross	Canada has one of the most successful immigration policies in the world and these new immigrants generally help the economy grow, which benefits us all. However, helping new immigrants at the expense of Canadians who need support seems unfair. I simply don't know if we should admit more or fewer.
Right	Canada accepts far too many immigrants. Helping new immigrants at the expense of Canadians who need support is unfair. We need to reduce the number of immigrants we accept.
Left	Canada has one of the most successful immigration policies in the world and these new immigrants help the economy grow, which benefits us all. We need to increase the number of skilled immigrants.

Then the following were measured:

- The number of immigrants accepted to Canada should be decreased. (Agree strongly to disagree strongly)

- The money available to support new immigrants to Canada should be increased. (Agree strongly to disagree strongly)

- How likely would you be to sign a petition calling for Canada to reduce its international commitments to refugee resettlement? (Very unlikely to very likely)

Past candidate behaviour

Cross	If a candidate did something in the past that is now understood to be racist, should they be able to apologize and move on? I don't know if we can judge the past from the present. On the other hand, some Canadians may feel that the candidate cannot represent them. Tricky...
Right	If a candidate did something in the past that is now understood to be racist, they should be able to sincerely apologize and move on. This is simple — judging the past from the present is dangerous.
Left	If a candidate did something in the past that is now understood to be racist, then they are not fit for public office. This is simple — how can they lead for all Canadians when they discriminate against them?

Then the following were measured:

- Candidates who sincerely apologize for their actions should be able to continue to run for office. (Agree strongly to disagree strongly)

- Focusing heavily on past behaviour of candidates distracts from issues that actually matter to Canadians. (Agree strongly to disagree strongly)

- How likely would you be to sign a petition calling for political parties to disqualify candidates who have done something in the past that is now understood to be racist? (Very unlikely to very likely)

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