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Article

Perceptions and Concerns About Misinformation on Facebook in Canada, France, the US, and the UK

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Abstract

Across the globe, people are concerned about misinformation despite evidence suggesting actual exposure is limited and specific to subgroups. We examine the extent to which concerns about misinformation on Facebook are related to perceived exposure to misinformation on the platform (misinformation perceptions), political experiences on Facebook, and country context. Using survey data gathered in February 2021 in four countries (Canada, France, UK, and the US), we find a strong positive correlation between perceptions of and concerns about misinformation on Facebook. We explain that this concern about misinformation is rational in that it is rooted in personal experience of perceived exposure. Seeing political content and observing uncivil political discussions on Facebook also relate to concerns about misinformation. We explain heightened concerns about misinformation in terms of views about the virality of misinformation on Facebook as well as the presumed influence of misinformation on others (third-person effects), which makes misinformation a perceived threat to democracy and society. The observed relationships are supported in three of the four countries, but France tends to be an exception. Understanding citizens' concerns about misinformation is important for understanding support for interventions, including platform regulation.

Introduction

Across the globe, people are concerned about misinformation as documented in public opinion surveys (Altay, 2023; Knuutila, Neudert, & Howard, 2022; Matthes et al., 2023; Newman, Fletcher, Kalogeropoulos, Levy, & Nielsen, 2018; Newman, Fletcher, Schulz, Andi, & Nielsen, 2020; Vegetti & Mancosu, 2022) and a survey of global leaders (World Economic Forum, 2024). On the other hand, digital trace data suggest that exposure to online misinformation tends to be limited (Acerbi, Altay, & Mercier, 2022; Eady et al., 2023; Fletcher, Cornia, Graves, & Nielsen, 2018; Moore, Dahlke, & Hancock, 2023). Some argue that heightened concerns, despite limited exposure, relate to the media's alarmist framing of disinformation (Jungherr & Rauchfleisch, 2024), while others argue that misinformation effects are simply overstated at the aggregate level (Boulianne & Humprecht, 2023). Much of the research on concerns has been descriptive (Almenar, Aran-Ramspott, Suau, & Masip, 2021; Rodríguez-Virgili, Serrano-Puche, & Fernández, 2021), pointing out country differences (Knuutila et al., 2022; Newman et al., 2018). We move scholarship forward by considering cross-national differences in the relationship between concerns about misinformation on Facebook and three factors: perceived exposure to misinformation, uncivil political discussion, and political information on Facebook. We focus on Facebook, a highly used platform that has been the focal point for concerns about misinformation. Understanding concern provides important insights into support for platform regulation.

People are highly concerned about misinformation, particularly on Facebook. We explain these heightened concerns focusing on two ideas: the uncontrollable spread of misinformation and third-person effects. People are concerned because of their beliefs about the virality of misinformation due to Facebook's algorithm, which favors high-engagement content. People believe misinformation will influence this large international group of users' political attitudes and behaviors, i.e., the presumed influence on others.

We gathered data from four countries (Canada, France, the UK, and the US) in February 2021 using an online panel matched to census characteristics for each country. We focus on Facebook users (n = 4,858) as Facebook is the most widely used social networking site in these four Western democracies (Newman et al., 2022). Social media use seems to be the strongest predictor of perceived misinformation exposure (Boulianne, Tenove, & Buffie, 2022; Chan, Kuznetsov, Yi, Lee, & Chen, 2023; Humprecht, Esser, Aelst, Staender, & Morosoli, 2023; Humprecht, Esser, & Van Aelst, 2020; Jones-Jang, Kim, & Kenski, 2020; Koc-Michalska, Bimber, Gomez, Jenkins, & Boulianne, 2020; Lee, Gil de Zúñiga, & Munger, 2023; Lee, Johnson, & Sturm Wilkerson, 2023; Neyazi, Kalogeropoulos, & Nielsen, 2021; Rossini, Baptista, de Oliveira, & Stromer-Galley, 2021a; Rossini, Stromer-Galley, Baptista, & de Oliveira, 2021b; Vegetti & Mancosu, 2022) validating a focus on social media platforms to understand the relationship between exposure and concern. We find that perceived exposure to misinformation on Facebook positively

correlates with concerns about misinformation on Facebook. Indeed, this measure is the strongest predictor of levels of concern. These results suggest that concern about misinformation is rational because it is rooted in personal experiences of perceived exposure. Exposure to political information and uncivil political discussions on Facebook relate to both perceived exposure to and concerns about misinformation on Facebook. However, throughout the analysis, France tends to be an exception.

These findings are concerning in the context of democratic elections. Citizens may not be able to discern degrees of falsehoods in campaign information; they may reject both reliable and unreliable sources of political information (Acerbi et al., 2022). In the face of this uncertainty, they may forego voting or cast their ballot for candidates based on personalities, popularity, or other criteria unrelated to the candidates' qualifications or policy positions. While exposure to misinformation may be exaggerated or overstated, perceptions of exposure to misinformation can, nonetheless, have dire impacts, particularly on certain segments of the population (Boulianne & Humprecht, 2023).

Concerns About Misinformation Across the Globe

Concerns about misinformation are high across the globe (Altay, 2023; Knuutila et al., 2022; Matthes et al., 2023; Newman et al., 2018, 2020), with a survey of 1500 global leaders putting misinformation and disinformation as the top concern over the next two years (WEF, 2024). The World Economic Forum (2024, p. 19) explains this ranking:

> "Over the next two years, close to three billion people will head to the electoral polls across several economies, including the United States, India, the United Kingdom, Mexico and Indonesia…The presence of misinformation and disinformation in these electoral processes could seriously destabilize the real and perceived legitimacy of newly elected governments, risking political unrest, violence and terrorism, and a longer-term erosion of democratic processes."

The *Digital News Report* uses a cross-national survey to ask about "concern about what is real and fake on the Internet when it comes to news" (see Altay, 2023). Based on this measure, concern is high with cross-national variations. Of the four countries examined in this study, the US had the highest proportion of people (67%) concerned, followed by Canada (65%), the UK (63%), and France (62%) (Newman et al., 2020). For most types of misinformation, exposure aligns with concern; the exception relates to political misinformation, with 26% of respondents reporting exposure to stories that are made up for political reasons and 58% expressing concern about these types of stories (Newman et al., 2018). The findings suggest something distinctive about political misinformation; political misinformation is particularly concerning. Furthermore, the US seems to have the highest levels of concern (Newman et al., 2018, 2020); however, the differences are small (five percentage points) and within the margin of error if these estimates were based on probability-based samples.

Knnutila et al. (2022) find that respondents residing in liberal democracies are more likely to be worried about misinformation, which implies that the four countries examined in this study (France, Canada, the UK, and the US) would have high levels of concern compared to other types of political systems. In contrast, Altay (2023) examines concerns about misinformation in 46 countries, finding that concerns relate to lower press freedom, lower GDP per capita, and higher corruption in a country. These findings imply that the four Western democracies would have lower levels of concern about misinformation compared to other countries. In a study of 27 European countries, Vegetti and Mancosu (2022, p. 9) asked, "In your opinion, is the existence of news or information that misrepresents reality or is even false a problem in your country/for democracy?" They also found that concerns relate to lower press freedom and lower media accuracy (based on experts' assessment of the national media). Unfortunately, none of these studies offer insights into possible differences among Western democracies.

We use a platform focus. Survey research has shown that Facebook has concerning patterns with regard to misinformation. Blanco-Herrero, Amores, & Sánchez-Holgado (2021) used a platform focus to connect the "perceived presence of fake news in different types of media" (p. 5) and encounters with "content on social media that he or she believed to be fake" (p. 5). Facebook is one of the standout platforms regarding the frequency of use and the two measures of misinformation (Blanco-Herrero et al., 2021). Rossini et al. (2021b) examined self-reported exposure to false political information on WhatsApp and Facebook, finding that exposure is far more frequent on Facebook. Altay (2023) asked respondents about the medium for misinformation that was most concerning to them; Facebook was at the top of the list (29%) in contrast to news websites or apps (20%). In contrast, only 5% report Twitter. Finally, Almenar et al. (2021) asked about concerns about fake news on Facebook and Instagram, finding that Spanish respondents expressed higher concerns about Facebook. This research about Facebook and misinformation, along with the high usage rates in our four countries, suggests that Facebook is a critical platform for studying misinformation and concerns about misinformation.

RQ1. Are there cross-national differences in concerns about misinformation on Facebook?

Misinformation Perceptions and Concerns About Misinformation

At first glance, high levels of concern about misinformation may seem irrational, given that digital trace data studies suggest exposure to online misinformation tends to be limited (Eady et al., 2023; Fletcher et al., 2018; Haenschen, Shu, & Gilliland, 2023; Moore, Dahlke, & Hancock, 2023). Reviewing scholarship in the US, UK, France, and Germany, Acerbi et al. (2022) suggest the estimates are 6% or less of a respondent's news diet. Much of the research on misinformation focuses on the United States (Acerbi et al., 2022; Bak et al., 2023), which is believed to be vulnerable to information disorders (Benkler, Faris, & Roberts, 2018; Humprecht et al., 2020; Zeng & Chan, 2021). Eady et al. (2023) use Twitter tracking data about exposure to foreign influences and survey responses for 1,500 US respondents. They found that "only 1% of users accounted for 70% of exposures" and did not find evidence that exposure is linked to public opinion,

polarization, or voting (Eady et al., 2023, p. 1). Moore et al. (2023) find that visits to untrustworthy websites decreased in the 2020 U.S. election compared to the 2016 election, but conservatives were more exposed to these sites than liberals. Moving outside the US, Fletcher et al. (2018, p. 1) found that most fake news sites in France and Italy reached just 1% of the online population, and none reached more than 3.5%. In a cross-lingual analysis of false articles propagating COVID-19 misinformation in China, the US, India, Germany, and France, Zeng and Chan (2021, p. 14) found that Germany was distinctive in low prevalence of COVID misinformation, whereas the US had the highest prevalence. Based on this computational research, there are cross-national differences in exposure rates, but exposure estimates are consistently low.

Yet, surveys about perceptions of exposure to misinformation offer a different perspective (Altay, 2023; Boulianne et al., 2022; Boulianne & Humprecht, 2023; Chan et al., 2023; Jones-Jang et al., 2020; Koc-Michalska et al., 2020; S. Lee, Johnson, & Sturm Wilkerson, 2023; Matthes et al., 2023; Newman et al., 2018, 2020; Neyazi et al., 2021, 2022; Rossini et al., 2021a, b; T. Lee et al., 2023; Vegetti & Mancosu, 2022). Perceptions, or self-assessed measures, of exposure to misinformation are particularly contentious as these measures depend on people knowing what misinformation is, that is, verifiably false information (Guess & Lyons, 2020; Vraga & Bode, 2020). These measures offer higher estimates of exposure than other methods. In this paper, we use perceived exposure, following Matthes et al. (2023), Chang (2021), and others who argue that these perceptions are consequential for attitudes and behaviors.

To understand misinformation as a perceived threat to society requires a consideration of the prevalence, severity, and susceptibility; direct experience with misinformation is a key predictor of all three (Chang, 2021). We examine whether concerns about misinformation are rooted in personal experiences. In other words, people see what they believe to be misinformation and then become worried about its impact on society. In short, the concern becomes rational or subjectively justified.

Matthes et al. (2023) outline a theory connecting perceptions of misinformation and worrying about coronavirus disease 2019 (COVID-19). The theory focuses on impressions about the pandemic's *uncontrollability* and the media's *presumed influence* on others, particularly misinformation having dire consequences on other people's compliance with pandemic management efforts. Moving beyond the pandemic, we extend this model to the political context and introduce a platform focus. We argue that there are two potential reasons for high levels of concern about misinformation: (1) people worry about the fast, uncontrollable spread (virality) and (2) people worry about others being misled (third-person effects).

People see what they believe to be misinformation on Facebook. They know that information spreads quickly (due to algorithms) and widely (across a large, international user base) across Facebook. They may worry about the viral spread of misinformation on Facebook, which reaches across the globe. A US survey shows that people think that misinformation goes viral on social media; this perceived virality can be associated with a platform's algorithm prioritizing high-engagement posts (Rathje, Robertson, Brady, & Van Bavel, 2023). Indeed, citizens may see the spread of misinformation (vs. pandemic, as per Matthes et al., 2023) as *uncontrollable* and thus, worry about its effects. This virality contributes to Chang's (2021) ideas about prevalence and threat perceptions related to misinformation.

Furthermore, misinformation is considered a social problem because of views about severity and susceptibility (Chang, 2021). Scholarship has centered on the *presumed influence* on others or third-person effects (Corbu, Oprea, Negrea-Busuioc, & Radu, 2020; T. Lee et al., 2023). While this idea applies to any type of misinformation, the WEF (2024) frames misinformation in terms of the *susceptibility* of billions of voters and the *severe* outcomes on democracy. Misinformation could undermine election results, destabilizing "the real and perceived legitimacy of newly elected governments" (WEF, 2024, p. 19) considering Trump, Bolsonaro, and others who claim electoral fraud in the aftermath of a defeat, igniting riots in their respective countries. Specifically, citizens may worry that misinformation on Facebook may impact people's voting intentions (Nisbet, Mortenson, & Li, 2021). Nisbet et al. (2021) call this the "presumed influence of election misinformation."

Using this theoretical framework about threat perceptions, virality, and third-person effects, we examine:

H1. Perceived misinformation on Facebook positively correlates with concerns about misinformation on Facebook.

RQ2. Are there cross-national differences in the correlation between perceived exposure to misinformation and concerns about misinformation?

Political Information and Concerns About Misinformation on Facebook

Partisanship or political ideology is linked to misinformation experiences in the US. Survey research finds a connection between partisanship/right-wing ideology and perceived exposure to misinformation in the US (Jones-Jang et al., 2020; S. Lee et al., 2023). As noted, Eady et al. (2023) find that engagement with false news was restricted to a small subset of the population—strong Republicans. In contrast, T. Lee et al. (2023) found that those on the right/Republicans were less likely to report exposure to fake news compared to Americans on the left/Democrats. Su (2021) did not find ideological differences in Americans' beliefs in COVID-19 misinformation. As such, the role of ideology in misinformation in the US may not be as strong as it once was.

International studies have also examined whether experiences of misinformation depend on political ideology. Boulianne and Humprecht (2023) use four-country survey data about self-reported misinformation exposure, finding that the effects of misinformation on political trust are larger among US respondents who identify as right-wing. In other words, the effects of misinformation are particular to a subgroup, affirming Eady et al.'s (2023) finding using trace data on Twitter. Furthermore, Valenzuela and colleagues use multiwave panels, finding that political ideology does not predict exposure to false news in Chile (Bachmann, Valenzuela, Mujica, Labarca, Grassau, & Halpern, 2024), sharing misinformation in Chile (Bachmann et al., 2024; Valenzuela, Halpern, Katz, & Miranda, 2019) or Mexico (Valenzuela, Halpern, Katz, & Miranda, 2022). Likewise, a longitudinal survey in Austria finds that ideology does not predict perceived exposure to misinformation (Stubenvoll, Heiss, & Matthes, 2021). While we account for political ideology, this

scholarship indicates a need to move beyond political ideology to explain misinformation experiences when trying to understand more global experiences.

Politicians' uptake of fake news narratives and their (and citizens') willingness to share this misinformation has placed politics at center stage in the flow of misinformation (Brennen, Simon, Howard, & Nielsen, 2020; Mosleh, & Rand, 2022). "Fake news" is used to discredit, attack, and delegitimize political opponents (Egelhofer & Lecheler, 2019; Farkas & Schou, 2018), as noted in relation to Trump. Altay (2023) reports that respondents in 46 countries are more concerned about misinformation from their own government than foreign governments (also see Newman et al., 2020). Hameleers, Brosius, & de Vreese (2021) report that politicians, rather than the government, are believed to be a source of misinformation based on a survey conducted in 10 European countries.

Nisbet et al. (2021) documented that attention to political news positively correlates with the "presumed influence of misinformation on other voters." We extend these ideas by looking into exposure to political information on Facebook. We argue this political information correlates with concerns about misinformation, because of perceived *third-person effects*. The more that citizens see political information, the more they worry about other people being unable to distinguish the two types of information. In addition, they may be aware of the potential *virality* of political misinformation, which enables the content to spread across the globe before the information can be verified as either truthful or false/misleading. For example, international survey respondents reported high awareness of false information related to the 2020 U.S. election, including Trump's claims about electoral fraud (Boulianne, Belland, Tenove, & Friesen, 2021).

H2. Exposure to political information on Facebook correlates with concerns about misinformation on Facebook.

RQ3. Are there cross-national differences in the correlation between exposure to political information and concerns about misinformation on Facebook?

Uncivil Political Discussion and Concerns About Misinformation on Facebook

Several studies document the correlation between political discussion and misinformation perceptions (Neyazi et al., 2022; Rossini et al., 2021b). Likewise, Valenzuela, Muñiz, & Santos (2022) find that political discussion is associated with beliefs in false information related to the 2021 midterm Mexico election. Offering further nuance, Rossini and Kalogeropoulos (2023) find that talking to strangers in WhatsApp groups increases beliefs in misinformation about COVID-19 using two-wave panel data, whereas Su (2021) suggests that preferring political discussion with people who agree with you increases beliefs in misinformation about COVID-19, but decreases worrying about the COVID-19 pandemic. Altay (2023) reports that talking about the news and other measures of news engagement are positively related to concerns about misinformation.

Clearly, political discussion matters to misinformation experiences. We seek to extend this analysis by exploring uncivil political discussion on Facebook and its role in exposure to and concerns about misinformation. Political discussions offer critical opportunities for people to share or cite false information as support for one's political views. These political conversations may become uncivil when truth claims are debated and/or people are told their information is false. In more extreme forms, this discussion could involve name-calling, such as being called a liar (e.g., Sydnor, 2019) or having one's preferred candidate called a liar. Incivility includes being disrespectful and impolite, which violates social norms on tone or word choice (Sydnor, 2019).

While few people engage in political discussion on Facebook, social media allows people to observe this political discussion and the sharing of misinformation in the context of these discussions. In other words, they are bystanders watching these uncivil discussions. Watching these interactions heightens one's awareness of others and their susceptibility to misinformation (presumed influence), activating *third-person* effects. These discussions generate comments and perhaps angry reactions/emojis, which can trigger the algorithm that favors high-engagement content (Merrill & Oremus, 2021) and contributes to the *virality* of this content. Using Facebook data, Guess et al. (2023) examine how changes to the algorithm influence exposure to content in the context of the 2020 U.S. Election. They found that switching to a chronological algorithm decreased exposure to content classified as uncivil compared to the existing algorithm.

H3. Exposure to (un)civil political discussions on Facebook correlates with concerns about misinformation on Facebook.

RQ4. Are there cross-national differences in the correlation between uncivil political discussions and concerns about misinformation on Facebook?

Methods

We gathered data from four countries (Canada, France, the UK, and the US) in February 2021. Kantar was hired to administer this online survey to their online panel (n = 6,068). Quotas were used to ensure appropriate age, education, and sex representation for each country based on the census data from each country (for more information see Boulianne et al., 2021). The project received ethics approval (File No. 101856) in accordance with Canada's *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*. The survey was funded by a research grant from Canadian Heritage's Digital Citizenship Initiative; the survey was designed to study misinformation across countries and platforms. The data and replication files are available at 10.6084/m9.figshare.26742208.

For analysis purposes, we restrict the analysis to those who report having a Facebook account (n = 4,858); they make up about 80% of the total sample. Facebook usage is similar across all four countries (Canada n = 1,335, the US n = 1,157, France n = 1215, and the UK n = 1151). Given our large sample size, our research design will be able to detect an effect for correlations as small as 0.04 in the pooled sample and 0.08 in the country-specific samples.

Groves et al.'s (2009) widely cited textbook on survey methodology suggests that the accuracy of recall depends on a number of factors, including providing cues (e.g., question series about a topic) and offering introductions to slow the response process. While we asked respondents to recall very specific experiences about misinformation and Facebook use,

we believe that our strategy reflects best practices for yielding accurate responses. The survey began with a series of questions about misinformation, then immediately following these questions, we asked about the use of different social media platforms with seven follow-up questions for Facebook users.

We began the misinformation series with a definition: "The next questions will be about misinformation on social media. By misinformation, we mean false or misleading information." The definition perfectly aligns with how experts define misinformation (see Altay et al., 2023). When we returned to the topic of misinformation in the Facebook question series, we repeated the definition and asked, "In the past month, how often have you seen someone share misinformation on Facebook?" We offered the following response options: never, rarely, from time to time, and often. Table 1 outlines the averages and standard deviations (or, for dummy variables, percentages) for each variable for each country and the pooled sample.

Then, we provided a definition of political content (Guess, Munger, Nagler, & Tucker, 2019) and asked respondents about exposure. "Please think about current events in the world, news about elections, information about political figures, information about government performance, debates about public policy, and other political issues. During the past 12 months, how often have you seen this type of content when you are using Facebook?" Response options were never, rarely, from time to time, and often (Table 1).

For concerns about misinformation, we asked, "How serious a problem is false information or misinformation on Facebook?" We borrowed the question from the American National Election Study 2020. However, instead of just using "false information," we added the word "misinformation," which had been defined twice in the question series and as mentioned, matches experts' definitions (Altay et al., 2023). Response options were not at all, a little, moderately, very, and extremely (Table 1).

Finally, in this question series, we asked about the civility of political discussions on Facebook, again borrowing from the American National Election Study that asked about the degree of respectful and informative political conversations on Facebook. However, unlike the ANES version, we focus on "civility" and offer a bipolar response scale to reflect the degree of civility and incivility. We asked, "Overall, how civil or uncivil are political conversations you see on Facebook?" with response options of extremely uncivil, somewhat uncivil, a little uncivil, a little civil, somewhat civil, and extremely civil (Table 1).

In addition, we account for a variety of other factors that may influence concern, including gender, education, and age. Concern about misinformation is connected with age (Altay, 2023; Knnutila et al., 2022; Rodríguez-Virgili et al., 2021; Vegetti & Mancosu, 2022) and gender (Almenar, Aran-Ramspott, Suau, & Masip, 2021; Altay, 2023; Neyazi et al., 2021; Rodríguez-Virgili et al., 2021). We also control for the frequency of Facebook use (never, rarely, time to time, and often) and use of Facebook Messenger (no, yes). For political interest, we asked, "How interested would you say you are in politics?" Respondents could answer not at all interested, not very interested, fairly interested, and very interested. For political ideology, we used an 11-point scale with answers for left (0) and right (10), with the middle category including those who said neither left nor right as well as don't know. We also included a correlation matrix of our variables. We find significant correlations among our four key variables: concern, perceived exposure, civil political discussion, and political information on Facebook (Table 2).

Results

The multivariate model suggests that France respondents are more concerned about misinformation, compared to U.S. respondents (RQ1). Our first hypothesis is about the positive correlation between perceived exposure to misinformation and concern about misinformation on Facebook (H1). We find a significant positive correlation ($B = 0.157$, $p < .001$, Table 3). Indeed, this is the strongest predictor of concern about misinformation. H2 and H3 examine how encountering political information and uncivil political discussions shape concerns about misinformation on Facebook (Table 3). Respondents who report seeing political information on Facebook are also more likely to report perceived exposure to misinformation ($B = 0.623$, $p < .001$) and concern about misinformation ($B = 0.099$, $p < .001$) on Facebook (H2). We asked respondents to rate the civility of discussions about politics on Facebook. We found that reports of greater civility decreased misinformation perceptions ($B = -0.082$, $p < .001$)

Table 1. Descriptive Statistics for Subset of Facebook Users (n = 4,858)

	US Mean (SD)	UK Mean (SD)	France Mean (SD)	Canada Mean (SD)	Pooled
Females (0–1)	52.7%	50.8%	52.8%	54.1%	52.7%
Education (1–4)	2.10 (1.09)	1.85 (1.05)	1.78 (0.99)	1.97 (0.99)	1.93 (1.03)
Age (18–100)	46.95 (18.27)	46.47 (16.70)	47.14 (16.08)	47.41 (17.40)	47.01 (17.13)
Political ideology, 0(left)–10(right)	5.79 (2.79)	5.31 (2.14)	5.27 (2.35)	4.92 (2.17)	5.31 (2.39)
Political interest (1–4)	2.76 (0.99)	2.51 (0.93)	2.29 (0.97)	2.52 (0.90)	2.52 (0.96)
Seen political information on Facebook (1–4)	2.73 (1.04)	2.25 (1.03)	2.15 (1.02)	2.47 (1.01)	2.40 (1.05)
Civility of political discussion on Facebook (1–6)	3.48 (1.53)	3.39 (1.35)	3.73 (1.32)	3.59 (1.36)	3.55 (1.40)
Frequency of Facebook use (2–4)	3.42 (0.72)	3.44 (0.75)	3.47 (0.72)	3.47 (0.72)	3.45 (0.73)
Facebook messenger use (0–1)	64.2%	70.5%	69.5%	73.9%	69.7%
Perceived exposure to misinformation on Facebook (1–4)	2.41 (1.11)	2.04 (1.06)	1.91 (1.01)	2.20 (1.06)	2.14 (1.08)
Concern about misinformation on Facebook	3.39 (1.19)	3.23 (1.15)	3.40 (1.01)	3.34 (1.07)	3.34 (1.11)

Table 2. Correlation Matrix

		1	2	3	4	5	6	7	8	9	10
1. Concern about misinfo on FB	*r*	1	.246	.004	-.020	−.126	.224	.179	−.058	−.008	.085
	p		<.001	.779	.170	<.001	<.001	<.001	<.001	.568	<.001
2. Perceptions of misinfo on FB	*r*	.246	1	.165	.175	−.162	.685	.236	.007	−.169	.113
	p	<.001		<.001	<.001	<.001	<.001	<.001	.641	<.001	<.001
3. FB Messenger	*r*	.004	.165	1	.401	.014	.203	.000	−.045	−.069	−.009
	p	.779	<.001		<.001	.325	<.001	.988	.002	<.001	.519
4. FB frequency	*r*	−.020	.175	.401	1	.034	.234	−.006	−.038	.049	−.038
	p	.170	<.001	<.001		.019	<.001	.675	.007	.001	.008
5. Civil political discussion on FB	*r*	−.126	−.162	.014	.034	1	−.134	.011	.083	−.007	.022
	p	<.001	<.001	.325	.019		<.001	.426	<.001	.614	.126
6. Political information on FB	*r*	.224	.685	.203	.234	−.134	1	.271	.013	−.109	.099
	p	<.001	<.001	<.001	<.001	<.001		<.001	.379	<.001	<.001
7. Political interest	*r*	.179	.236	.000	−.006	.011	.271	1	.055	.103	.212
	p	<.001	<.001	.988	.675	.426	<.001		<.001	<.001	<.001
8. Political ideology	*r*	−.058	.007	−.045	−.038	.083	.013	.055	1	.028	−.003
	p	<.001	.641	.002	.007	<.001	.379	<.001		.050	.837
9. Age	*r*	−.008	−.169	−.069	.049	−.007	−.109	.103	.028	1	−.032
	p	.568	<.001	<.001	.001	.614	<.001	<.001	.050		.026
1. Education	*r*	.085	.113	−.009	−.038	.022	.099	.212	−.003	−.032	1
	p	<.001	<.001	.519	.008	.126	<.001	<.001	.837	.026	
11. Females	*r*	−.002	−.010	.108	.077	−.026	−.007	−.184	−.081	−.092	−.005
	p	.910	.483	<.001	<.001	.070	.629	<.001	<.001	<.001	.728

FB = Facebook; misinfo = misinformation.

Table 3. Ordinary Least Squares Regression of Misinformation on Facebook

	Perceived exposure to misinformation on Facebook, n = 4,829, R-squared = 0.489				Concern about misinformation on Facebook, n = 4,829, R-squared = 0.105			
Model 1: Main model	***b***	**SE**	***B***	***p***	***b***	**SE**	***B***	***p***
Perceived exposure to misinformation on Facebook					0.162	0.020	0.157	<.001
Facebook Messenger use	0.051	0.027	0.022	.056	−0.051	0.036	−0.021	.163
Frequency of Facebook use	0.046	0.017	0.031	.007	−0.097	0.023	−0.064	<.001
Civility of political discussion on Facebook	−0.063	0.008	−0.082	<.001	−0.070	0.011	−0.088	<.001
Political information on Facebook	0.639	0.012	0.623	<.001	0.104	0.021	0.099	<.001
Political interest	0.074	0.013	0.066	<.001	0.144	0.017	0.125	<.001
Political ideology	0.003	0.005	0.006	.555	−0.027	0.006	−0.058	<.001
Age	−0.007	0.001	−0.108	<.001	0.001	0.001	0.022	.123
Education	0.036	0.011	0.034	.001	0.041	0.015	0.038	.007
Females	−0.021	0.023	−0.010	.361	0.056	0.031	0.025	.070
United Kingdom	−0.043	0.033	−0.017	.194	−0.028	0.045	−0.011	.539
France	−0.062	0.033	−0.025	.060	0.239	0.045	0.094	<.001
Canada	−0.011	0.032	−0.004	.735	0.038	0.043	0.015	.381

Males and US respondents are the reference groups for the above analysis.

and concerns about misinformation (B = -0.088, p < .001) on Facebook (H3). Inversely, observing uncivil discussion increases perceptions of misinformation and heightens concerns about misinformation.

We present the country-specific results in Table 4 (North American countries) and Table 5 (European countries). Figure 1 highlights the findings in relation to RQ2. Figure 1 presents the unstandardized coefficients with 95% confidence intervals. When there is an overlap in the confidence intervals, we interpret this pattern as a lack of statistically significant country differences at the 0.05 level. When the interval overlaps with zero, the coefficient is not statistically significant. The France-specific regression analysis suggests that the correlation between perceived exposure and concern is not statistically significant (RQ2, Figure 1 and Table 5). For the other three countries, perceived exposure correlates with concerns about misinformation on Facebook (B's range from 0.166 to 0.267).

In relation to RQ3, respondents who report seeing political information on Facebook are also more likely to report perceived exposure to misinformation (B's range from 0.595 to 0.655) and concern about misinformation (B's range from 0.082 to 0.175). This time the UK is the exception as political information does not significantly correlate with concerns about misinformation. Reports of greater civility decreased misinformation perceptions (B's range from −0.059 to −0.133) in all four countries. Civility in political discussion decreased concerns about misinformation (B's range from −0.085 to −0.130) on Facebook in three of the four countries with France being the exception (RQ4). In other words, incivility in political discussions increased concerns about misinformation in all countries except France.

Beyond our hypotheses and the research question, we note a number of interesting patterns. Our models are better at explaining variations in perceived exposure to misinformation on Facebook than concerns about misinformation (Table 3). The model explains almost 50% of the variance in perceptions of misinformation, whereas the model only explains 10.5% of the variance in concerns about misinformation (pooled sample). However, there are cross-national differences in the model fit for concern (Tables 4 and 5). In particular, the model fit for concern is poor for France (3%), which makes sense since the key variable (exposure) is not statistically significant, but in other countries, the explained variance ranges from 13% in Canada, 13.6% in the UK, and 18.3% in the US.

While the scholarship on misinformation focuses on political ideology, we do not find significant ideological differences in perceived exposure to misinformation in any of the four countries or the pooled results (Tables 3, 4, 5) and only a small negative correlation between right-wing ideology and concern about misinformation on Facebook (Table 3). In the country-specific samples, political ideology is only significant for concern about misinformation in Canada, with right-wing Canadians being less concerned (Table 4). Political interest positively and significantly correlates with exposure to and concerns about misinformation on Facebook (Table 3). This finding is significant in the country-specific models (Tables 4 and 5) except for perceived exposure to misinformation in France.

Discussion

To summarize, we find that people who perceived that they were exposed to misinformation are more concerned about misinformation (H1). Misinformation is heavily concentrated in the context of politics, so the more political content users consume on Facebook, the more concerned they are about misinformation (H2). Finally, incivility in political discussion on Facebook fuels concerns about misinformation (H3).

We rely on perceived exposure to misinformation, which in this context, is important. Self-reports imply that the supposed misinformation was encoded into memory and thus, this encoding means that the information could shape subsequent attitudes and behaviors. We find strong support for the relationship between perceptions of misinformation and

Table 4. Ordinary Least Squares Regression of Misinformation on Facebook for North American Countries

US	Perceived exposure to misinformation on Facebook, n = 1,150, R-squared = 0.445				Concern about misinformation on Facebook, n = 1150, R-squared = 0.183			
	b	SE	Beta	*p*	*b*	SE	Beta	*p*
Self-assessed exposure to misinformation on Facebook					0.187	0.038	0.175	<.001
Facebook Messenger use	0.039	0.056	0.017	.481	−0.117	0.072	−0.047	.105
Frequency of Facebook use	0.071	0.037	0.046	.059	−0.114	0.049	−0.069	.019
Civility of political discussion on Facebook	−0.043	0.017	−0.059	.010	−0.066	0.022	−0.085	.002
Seen political information on Facebook	0.633	0.026	0.595	<.001	0.199	0.041	0.175	<.001
Political interest	0.111	0.027	0.099	<.001	0.184	0.035	0.153	<.001
Political ideology	0.002	0.009	0.005	.814	−0.022	0.012	−0.052	.060
Age	−0.007	0.001	−0.110	<.001	−0.003	0.002	−0.048	.088
Education	0.024	0.023	0.023	.302	0.107	0.030	0.098	<.001
Females	−0.012	0.050	−0.005	.816	0.020	0.065	0.008	.764
Canada	**Perceived exposure to misinformation on Facebook, n = 1328, R-squared = 0.486**				**Concern about misinformation on Facebook, n = 1328, R-squared = 0.130**			
Self-assessed exposure to misinformation on Facebook					0.167	0.036	0.166	<.001
Facebook Messenger use	0.119	0.052	0.050	.023	−0.103	0.069	−0.042	.136
Frequency of Facebook use	−0.011	0.033	−0.007	.744	−0.113	0.043	−0.076	.009
Civility of political discussion on Facebook	−0.103	0.016	−0.133	<.001	−0.089	0.021	−0.114	<.001
Seen political information on Facebook	0.638	0.023	0.606	<.001	0.106	0.038	0.100	.005
Political interest	0.062	0.025	0.052	.013	0.182	0.033	0.153	<.001
Political ideology	0.00004	0.010	0.00008	.997	−0.044	0.013	−0.090	.001
Age	−0.008	0.001	−0.136	<.001	0.001	0.002	0.020	.458
Education	0.058	0.022	0.054	.008	−0.013	0.029	−0.012	.653
Females	−0.047	0.044	−0.022	.285	0.081	0.057	0.038	.157

concerns about misinformation. We find strong support for our three hypotheses in the USA, France, and Canada, but for France, uncivil discussion and perceived exposure to misinformation do not significantly relate to concerns about misinformation on Facebook. In a survey of 10 European countries, Hameleers et al. (2022) found that perceptions about misinformation in news media correlate with freedom of the press scores, with those countries with lower freedom scores showing higher perceptions about misinformation in news media than those with higher scores (similar to Vegetti & Mancosu, 2022). However, Hameleers et al. (2022) found that France stands out as having higher levels of perceived misinformation in the news media compared to other Western and Northern European countries, which the authors attribute to the radical right and yellow vest movement which have contributed to negative views about the mainstream media. We also found that France was an exception.

However, Altay (2023) presents changes in concern about misinformation (related to news media) over time in the four countries under study. Concern about misinformation is stable in Canada, the US, and the UK, but in France, there has been a decrease from 2018 to 2023. Our study might have captured a temporary difference in views between France and other countries; however, we suspect that this difference may now have disappeared, as Altay (2023) reports that France and Canada have similar levels of concern based on 2023 survey data.

We borrow our theoretical framework from Matthes et al.'s (2023) work about COVID-19 and Chang's (2021) work on threat perceptions and misinformation, but we focus on politics and use a platform focus. We argue that exposure to misinformation is linked to concern due to the *uncontrollability* or virality of misinformation on Facebook and perceived *third-person effects*. People believe that others are susceptible to misinformation (Chang, 2021; Corbu, Oprea, Negrea-Busuioc, & Radu, 2022; Matthes et al., 2023; T. Lee et al., 2023). In particular, we follow Nisbet et al.'s (2021) idea of "presumed influence of election misinformation." People who are exposed to misinformation are deeply concerned because they fear that other people's votes will be influenced by false and misleading information. WEF (2024) explained their concern about misinformation regarding the upcoming elections and the severe possibility of electoral manipulation. Of course, we did not directly test this set of theoretical claims. Instead, we build on other scholarship documenting a correlation between concerns and misinformation about COVID-19 (Matthes et al., 2023; Su, 2021), threat perceptions and misinformation (Chang, 2021), virality of misinformation (Rathje et al., 2023), as well as third-person effects (Corbu et al., 2020; Matthes et al., 2023; Nisbet et al., 2021; T. Lee et al., 2023).

We move scholarship forward by considering how political experiences on Facebook explain perceived exposure to and concerns about misinformation on Facebook. Seeing

Table 5: Ordinary Least Squares Regression of Misinformation on Facebook for European countries

UK	Perceived exposure to misinformation on Facebook, *n* = 1141, *R*-squared = 0.527				Concern about misinformation on Facebook, *n* = 1141, *R*-squared = 0.136			
	b	SE	Beta	*p*	*b*	SE	Beta	*p*
Self-assessed exposure to misinformation on Facebook					0.289	0.044	0.267	<.001
Facebook Messenger use	0.030	0.053	0.013	.574	0.057	0.077	0.023	.460
Frequency of Facebook use	0.034	0.032	0.024	.294	−0.073	0.047	−0.048	.125
Civility of political discussion on Facebook	−0.051	0.016	−0.066	.002	−0.110	0.024	−0.130	<.001
Seen political information on Facebook	0.670	0.023	0.655	<.001	0.023	0.045	0.021	.608
Political interest	0.100	0.025	0.088	<.001	0.128	0.038	0.104	.001
Political ideology	0.008	0.010	0.015	.460	−0.010	0.015	−0.019	.499
Age	−0.008	0.001	−0.126	<.001	0.002	0.002	0.026	.371
Education	0.007	0.021	0.007	.755	0.055	0.031	0.051	.075
Females	0.026	0.045	0.012	.564	−0.001	0.066	−<0.001	.990
France	**Perceived exposure to misinformation on Facebook, *n* = 1210, *R*-squared = 0.459**				**Concern about misinformation on Facebook, *n* = 1210, *R*-squared = 0.031**			
Self-assessed exposure to misinformation on Facebook					−0.014	0.039	−0.014	.720
Facebook Messenger use	0.035	0.054	0.016	.522	−0.016	0.072	−0.007	.830
Frequency of Facebook use	0.090	0.034	0.064	.009	−0.084	0.046	−0.060	.068
Civility of political discussion on Facebook	−0.059	0.016	−0.077	<.001	−0.036	0.022	−0.047	.104
Seen political information on Facebook	0.614	0.023	0.617	<.001	0.082	0.039	0.082	.037
Political interest	0.026	0.024	0.025	.284	0.076	0.033	0.073	.019
Political ideology	0.001	0.009	0.002	.914	−0.024	0.012	−0.056	.051
Age	−0.003	0.001	−0.045	.044	0.006	0.002	0.099	.001
Education	0.067	0.023	0.066	.003	0.039	0.031	0.038	.200
Females	−0.057	0.045	−0.028	.202	0.097	0.060	0.048	.109

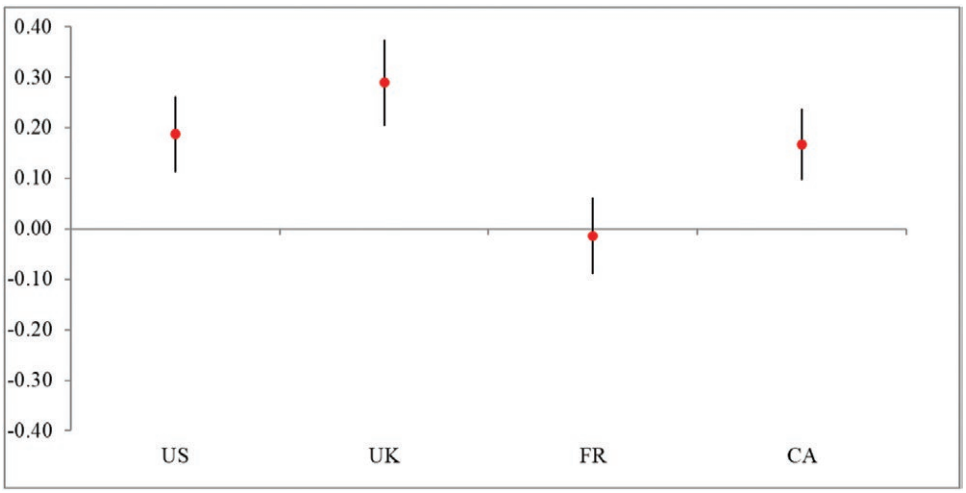

Figure 1. Unstandardized estimates (with 95% confidence intervals) of the relationship between perceived exposure to misinformation and concern about misinformation on Facebook.

political content relates to perceived exposure to and concerns about misinformation. The correlation between seeing political information and perceptions of misinformation is very large, raising questions about whether respondents have a tendency to assume any political information on Facebook may be false or misleading rather than distinguishing verifiably false information (Guess & Lyons, 2020; Vraga & Bode, 2020) from other types of political information. In this context, citizens may not exercise the necessary effort to untangle truthful from less truthful political information. This can lead to rejecting both types of information (Acerbi et al., 2022).

Conflating misinformation with political information could exacerbate concerns about misinformation. We explain this with our theory about the uncontrollable spread (or virality) of political (mis)information on Facebook, given the algorithm and the global user group. As noted, uncivil discussion on Facebook increases perceived exposure to and concerns about misinformation. The algorithm prioritizes high-engagement content including uncivil discussion (Guess et al., 2023), which could elicit an angry reaction (Merrill & Oremus, 2021).

While our study offers some critical insights about cross-national experiences of misinformation, our design has some limitations. First, we cannot untangle the causal process. We replicate Matthes et al.'s (2023) causal flow, which assumes that perceived exposure leads to concern (vs. T. Lee et al., 2023 concern to perceived exposure), but we recognize that the relationship is likely reciprocal. People who worry a lot about misinformation may also tend to see more of it because they are more attentive or sensitive to it. Furthermore, we do not know the causal flow connecting uncivil discussion, political information, perceived exposure to misinformation, and concerns about misinformation on Facebook. Second, web-tracking data would help to calibrate the measure about perceived exposure to misinformation and assess the extent to which people are exposed to this misinformation from their peers or politicians, following research that has been done related to political information (Haenschen, 2020). Much of the research has focused on fake news, poor-quality news sources, and perceptions about news media (e.g., Altay, 2023; Chang, 2021; Hameleers et al., 2022; Fletcher et al., 2018; T. Lee et al., 2023; S. Lee et al., 2023; Ognyanova, Lazer, Robertson, & Wilson, 2020), leaving gaps in our understanding about political misinformation from other sources.

Concerns about misinformation correlate with support for government interventions to address misinformation (Newman et al., 2018; F. L. Lee, 2022), just as concerns about climate change are linked to support for policy interventions (Malka, Krosnick, & Langer, 2009). However, support for government intervention varies by country, with European respondents supporting government intervention to a greater degree than respondents in the United States (Newman et al., 2018). Specifically, 75% of respondents think journalists and media companies should do more to combat misinformation, 71% think the platforms should do more, and 61% think governments should do more (Newman et al., 2018). Furthermore, Hameleers et al. (2022) reported that support for government intervention positively related to perceptions about misinformation in the news media but negatively related to perceptions about disinformation (intentionally biased or false media reporting) in the news media. As such, understanding cross-national differences in concerns about misinformation is important to understanding support for policy interventions.

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