Googling in Russian Abroad: How Kremlin-Affiliated Websites Contribute to the Visibility of COVID-19 Conspiracy Theories in Search Results

FLORIAN TOEPFL[1]
ANNA RYZHOVA
DARIA KRAVETS
ARISTA BESELER
University of Passau, Germany

Research that audited search algorithms typically deployed queries in one language fielded from within only one country. In contrast, this study scrutinized 8,800 Google results retrieved in November 2020 from 5 countries (Russia, the United States, Germany, Ukraine, and Belarus) in response to queries on COVID-19 conspiracy theories in Russian and English. We found that the pandemic appeared similar to people who googled in Russian independent of their geolocation. The only exception was Ukraine, which had implemented rigorous media policies to limit the reach of websites affiliated with Russia within its national public sphere. Conspiracy narratives varied with input language. In response to Russian-language queries, 35.5% of the conspiratorial results suspected U.S. plotters to be behind the pandemic (English language: 5.8%). All source pages that blamed U.S. plotters showed connections with Russia's elites. These findings raise important theoretical questions for today's multilingual societies, where the practice of searching in nonlocal languages is increasing.

Keywords: search engines, Google, Russia, conspiracy theory, disinformation, COVID-19, algorithms

In January 2016, Russia's leading domestic TV channels propagated a conspiracy theory that accused the German police of covering up the rape of Lisa, a Russian-speaking 13-year-old girl from Berlin, by migrants of Arab origin (Meister, 2016). Even though these conspiracy claims were blatantly false, the story was extensively reported by Russia's Kremlin-controlled domestic and foreign media, further magnified by Russian-language social media and German right-wing groups, and ultimately backed up by Russia's foreign minister Sergey Lavrov (Meister, 2016). As shown in Figure 1, shortly after the orchestrated scandal broke, the number of related Russian-language queries, including the terms "Lisa" (Russian: *Лиза*) and

Florian Toepfl: florian.toepfl@uni-passau.de
Anna Ryzhova: anna.ryzhova@uni-passau.de
Daria Kravets: daria.kravets@uni-passau.de
Arista Beseler: arista.beseler@uni-passau.de
Date submitted: 2022-01-25

"rape" (*изнаси́лование*), on the Google platform surged. The story quickly gained traction against the background of fears about the potential consequences of the so-called refugee crisis in the Russian-speaking community in Germany (Sablina, 2021), and public arousal galvanized in street protests in several German cities, where Russian speakers prominently marched alongside far-right groups. The German and other European governments followed this so-called Lisa case (Meister, 2016) with great concern. This case vividly illustrated how (foreign-state-sponsored) online *disinformation* (broadly understood as false information disseminated on purpose; see also the definition of key terms further below), even when circulated in nonlocal languages, could move the local multilingual citizens to take political action.
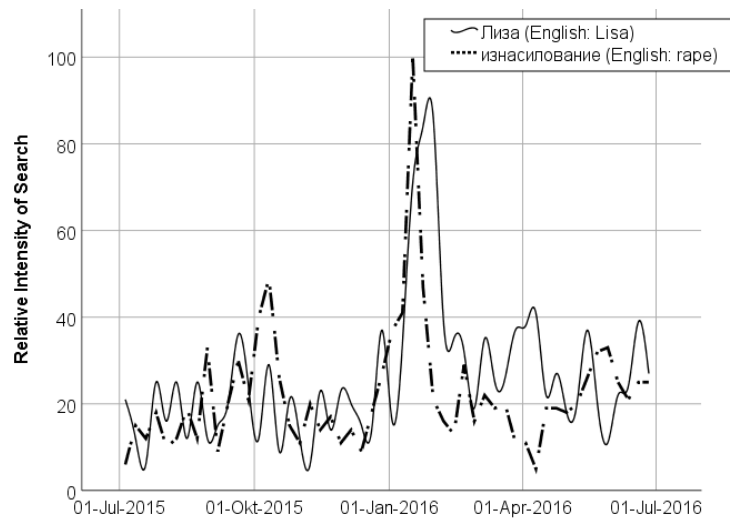
Figure 1. Relative search interest in Russian-language search terms from Germany. Source: Google Trends (2022).

In today's heavily digitalized media environments, web search engines are among the most powerful mediators of political news (Dutton, Reisdorf, Dubois, & Blank, 2017; Newman et al., 2021), and Google dominates the global search engine market (Statista, 2021). The role of search algorithms in spreading disinformation must not be underestimated, particularly in the immediate aftermath of key events, when individuals turn to search platforms to find out details about what exactly happened (see Figure 1). Kravets and Toepfl (2021) argued that search engine outputs immediately after street protests can play a major role in sustaining the protest movement. Against this empirical backdrop, this study raises an overarching research question: *How does Kremlin-sponsored disinformation, as accessed through Google from different countries, vary with (a) the language in which individuals enter query terms and (b) their physical location?* To work toward addressing this question, this study scrutinizes a recent disinformation topic of high political relevance: coronavirus disease 2019 (COVID-19) conspiracy theories. In particular, this study examines Google search results in response to Russian-language queries (in comparison with English-language queries) for primarily three reasons: (1) Russia is presently considered a key disinformation actor on the international stage by Western democratic governments (Ehrett et al., 2021; U.S. Department of State, 2020; Yablokov & Chatterje-Doody, 2021); (2) in the past decade, many of Russia's foreign influence efforts have sought to reach out to Russian speakers abroad (Decker, 2021; Mustajoki, Protassova, & Yelenevskaya, 2019; Szostek, 2018); and

(3) political information retrieved by algorithms from the Russian-language Internet segment is often heavily penetrated with content of websites, closely connected to Russia's ruling elites (Erbsen, 2019; Toepfl, Kravets, Ryzhova, & Beseler, 2022; Wijermars, 2021).

Specifically, in this study, we scrutinized a data set of 8,800 results of four purposefully selected search queries on Google ("COVID-19," "COVID-19 origin," "COVID-19 truth," and "COVID-19 conspiracy theories") using the English language and the Russian language (in Cyrillic alphabet). All the queries were repeated at three-day intervals throughout the month of November 2020 and fielded via proxy servers purchased in five countries (Russia, the United States, Germany, Ukraine, and Belarus). For each query, we considered the top 20 resulting URLs. All unique result pages ($N = 1,161$) were subjected to manual quantitative content analysis. Human coders established, among others, (1) whether the result pages featured conspiracy narratives that were not explicitly debunked; (2) who the malignant plotters behind the conspiracy were suspected to be; (3) where the plotters were from; and (4) whether the source websites were based in Russia and/or featured connections with Russia's ruling elites (further referred to as "Kremlin-affiliated" or "Kremlin-controlled" websites; for details, see the *Methods* section).

The remainder of this study is structured as follows. First, we will define the key concepts deployed in this analysis and review studies that audited search engines for political (dis)information. We will also put forward an argument about the growing importance of transnational and multilingual algorithmic audits. Following that, we will state our research questions and hypotheses. Next, we will detail our methodological approach, after which we present our findings. In the last section, we discuss how this study advances our knowledge about the informational influence of Russia's ruling elites on Russian speakers abroad and, more generally, our knowledge of research auditing search algorithms.

On Conspiracy Theories, Mis- and Disinformation: Defining Key Concepts

In this section, we define three key theoretical concepts deployed in the subsequent argument: conspiracy theories, misinformation, and disinformation (see also Toepfl et al., 2022). According to Douglas and colleagues (2019), *conspiracy theories* are "attempts to explain the ultimate causes of significant social and political events and circumstances with claims of secret plots by [. . .] powerful actors" (p. 4). Importantly, we assume that *conspiracy theories*, or allegations of conspiracy, "may or may not be true" (Douglas et al., 2019, p. 4; see also Radnitz, 2021; Sunstein & Vermeule, 2009). Thus, while some conspiracy theories may turn out to be true later, the key element of this understanding is that "credible evidence" to support the conspiratorial claim is not "available to the public or verified by reliable sources at the time" (Radnitz, 2021, p. 8) when the claim is made.

In contrast, *misinformation* is frequently understood as time-independent, "objectively incorrect information" (Bode & Vraga, 2015, p. 621). However, particularly in the field of political communication, it is often difficult to separate correct from incorrect information, with many operationalizations relying on reference to an "expert consensus" (Vraga & Bode, 2020, p. 137) to make this distinction (Ha, Andreu Perez, & Ray, 2021; Hussein, Juneja, & Mitra, 2020). For instance, Vraga and Bode (2020) proposed to classify misinformation issues according to whether the expertise for them and evidence of them are (a) both "clear and settled," (b) "emerging," or (c) "controversial" (p. 141; see also Toepfl et al., 2022).

Finally, *disinformation* is frequently understood as "misinformation that is spread on purpose and with a malicious intent" (Ha et al., 2021; Toepfl et al., 2022, p. 6). While it is often challenging to "ascertain the intention of the message" (Ha et al., 2021, p. 291), straightforward examples of disinformation highlighted in the literature include "deceptive political and commercial advertisements, government propaganda, forged documents, internet frauds, fake websites, and manipulated Wikipedia entries" (Ha et al., 2021, p. 291). According to this understanding, the conspiracy theories identified in this audit may be considered disinformation if they are spread by communication outlets with close connections with Russia's ruling elites. By *Russia's ruling elites*, we mean the country's autocratic leader Vladimir Putin and his closest allies, who hold powerful positions within Russia's economic and political system.

Search Engines and Global Disinformation Flows: Identifying Three Research Gaps

Searching the web is one of the most popular "side door[s]" (Newman et al., 2021, p. 23) to news across the globe. In a large-scale survey conducted across 40 countries, a quarter (25%) of the respondents on average said they would start their news journeys with a search engine (Newman et al., 2021). In a similar survey conducted across six European countries and the United States in January 2017, Dutton and colleagues (2017) found that the average respondent went online at least once a day to "find or check a fact" (p. 28). The persuasive impact of search content on audiences can be considered consequential as Internet users across the globe tend to "perceive search engines to be accurate and reliable sources of information" (Dutton et al., 2017, p. 5; Newman et al., 2021).

Research Gap 1: Auditing Search Engines for Misinformation and Disinformation

As search algorithms play a pivotal role in the flow of political information online, a growing strand of academic research has scrutinized their output for potentially problematic social and political consequences (for a recent literature overview, see Bandy, 2021). In this study, we use *political* information to mean any piece of information that relates to the process of collective decision making. In the subfield of political communication, researchers have critically interrogated, among other things, how politicians and parties are represented in search results during electoral campaigns (Puschmann, 2019; Urman, Makhortykh, & Ulloa, 2021); how diverse search results are for different political issues (Steiner, Magin, Stark, & Geiß, 2020); how search-platform personalization affects search results (Hussein et al., 2020; Puschmann, 2019); how historical events are represented in search results (Makhortykh, Urman, & Ulloa, 2021); and how search engines with ties to authoritarian elites cover sensitive events and issues (Kravets & Toepfl, 2021; Paltemaa, Vuori, Mattlin, & Katajisto, 2020; Schneider, 2018). However, Hussein et al. (2020) stated that "auditing online platforms for algorithmic misinformation is practically non-existing" (pp. 6, 48; see also Bandy, 2021; for recent exceptions, consider Hussein et al., 2020; Makhortykh, Urman, & Ulloa, 2020; Toepfl et al., 2022). This is the first gap in extant research that this study aims to fill. To do so, we chose to audit a series of search queries that target COVID-19 conspiracy theories as a recent mis- and disinformation topic of global relevance.

Research Gap 2: Connections of Search Result Sources With Russia's Elites

What virtually all extant algorithmic audits have in common is their deployment of search terms only in one language and from within the borders of one nation-state (consider Kravets & Toepfl, 2021;

Puschmann, 2019; Urman et al., 2021). Among the exceptions are two audits of the Chinese search engine *Baidu*, which have added to their audit of domestic Chinese search results a comparison of results retrieved from outside China, beyond the so-called Great Firewall (Paltemaa et al., 2020; Schneider, 2018, p. 207). A further exception is the audit by Makhortykh and colleagues (2021) of images retrieved in response to the search term "Holocaust" and its Russian translation across six search engines. In this study, queries were fielded from only one geolocation, the city of Frankfurt, in Germany. Makhortykh and colleagues (2021) found a "higher degree of malperformance for the Russian query" (n.p.) than for the English query. However, Makhortykh and colleagues (2021) did not investigate the role of the sources controlled by Russia's elites in shaping the output. To advance the literature auditing the political consequences of Internet users' physical locations and languages on their search output, this study systematically audited how patterns of meaning differ in the results of the world's most widely used web search engine, Google, when fielded from five different countries in two languages (Russian vs. English). In addition, this study seeks to gauge the visibility of sources connected to Russia's ruling elites, as well as to explore the geopolitical implications of who is blamed in the conspiracy theories. This is the second set of research gaps that this study fills.

Research Gap 3: Auditing Multilingual and Transnational Search Practices

The above-described scarcity of what might be referred to as "multilingual" or "transnational" search engine audits is highly politically relevant for at least four reasons. First, many contemporary nation-states have been linguistically diverse ever since they were created. For instance, in Switzerland, Belgium, and Canada, several languages have equal official status. Similarly, in Belarus, both Belarusian and Russian are considered official languages. In Ukraine, Ukrainian was declared the only official language after the collapse of the Soviet Union in 1991, but the Russian language remained in use in parts of the country (Mustajoki et al., 2019). Second, over the past three decades, the linguistic diversity of many nation-states has expanded because of "post-Cold-War geopolitical instabilities," "the increased salience of transnational phenomena associated with 'globalization'" (Fraser, 2007, p. 8), and migration movements. To provide but one example, since the 1980s, Germany has become home to a new community of at least 3 million Russian-speaking migrants, with most of them being the so-called resettlers from the countries of the former Soviet Union (*Russlanddeutsche* [Russian Germans]; Hamann, Witzlack-Makarevich, & Wulff, 2019). Third, over the past decades, foreign-language skills have been augmented with rising levels of education, particularly in developed nation-states, thereby contributing further to linguistic diversity. According to data provided by the European Statistical Office for 2016, approximately 65% of the population across the European Union (EU) knew at least one foreign language (Eurostat, 2019). A fourth reason for the political relevance of multilingual and transnational web search practices is that in the wake of rising levels of international conflict, many national governments—and particularly those of authoritarian states—have stepped up their foreign communication efforts massively. In the case of authoritarian Russia, for instance, this has resulted in what Richter (2015) pointedly referred to as an "outbreak of [international] propaganda" (p. 3140). Russia's ruling elites, besides targeting citizens of Western democracies with political messages in local languages (Yablokov & Chatterje-Doody, 2021), have increasingly considered the Russian language as "a tool to bind diasporas to the Fatherland and exert power over dispersed Russian-speaking communities" (Mustajoki et al., 2019, p. 4; Szostek, 2018; see also the Introduction to this study). Although several studies have analyzed how Russian-speaking groups abroad receive, use, and interpret Russian-language media content (Erbsen, 2019; Vihalemm & Juzefovičs, 2021), we know very little about what political messages Russian-speaking communities obtain when they pursue one of the most common activities

online: searching the web for news and facts (Dutton et al., 2017; Newman et al., 2021). This is a third research gap that this study seeks to address.

Developing Hypotheses and Research Questions

In this section, we develop two research questions (RQs) and one hypothesis. We opted to formulate RQs when not enough prior research was available to derive hypotheses.

Googling in Russian Abroad: The Political Consequences of National Geolocation

As Ørmen (2019) concluded from a review of search engine research, "geographic location appears to be one of [the more]—if not the most–influential cause[s] of fluctuations in search rankings" (p. 115; see also Hussein et al., 2020; Kliman-Silver, Hannak, Lazer, Wilson, & Mislove, 2015). However, differences appear to depend on what Internet users search for. In an audit of Google web searches that varied geolocation within the national borders of the United States, Kliman-Silver et al. (2015) found that queries for local establishments are heavily personalized, while "more general terms exhibit essentially no personalization" (p. 121; see also Hussein et al., 2020). The claim that results of general search terms are not heavily affected by geolocation was also made by Paltemaa et al. (2020) in their study of the Chinese search engine *Baidu*. Fielding mostly nonlocalizable search queries (that targeted politically sensitive events), they concluded that Baidu was not "location-sensitive" in the sense that "Baidu searches conducted both in- and outside China revealed almost identical results" (Paltemaa et al., 2020, p. 2074). To our knowledge, however, no study to date has systematically audited the impact of Internet users' international geolocation on results they retrieve from Google when searching for (nonlocalizable) political information or facts. Thus, we formulate our first research question as follows:

RQ1:   *When searching for information about COVID-19 in Russian, how does the national geolocation (i.e., the country) of the Internet user affect, in the retrieved results, (a) the proportion of undebunked conspiracy narratives, (b) the geographical origins of the plotters insinuated, and (c) the proportions of sources controlled by Russia's ruling elites?*

The Connections of Conspiratorial Russian-Language Results With Russia's Elites

According to Yablokov (2019), Russia's ruling elites often "actively exploit conspiracy theories to help them carry out their domestic politics and nation-building agenda, as well as achieve their goals in international relations" (p. 362). In their audit of local language queries targeting coronavirus conspiracy theories fielded from five countries, Toepfl and colleagues (2022) found that (a) conspiratorial content published on websites affiliated with Russia's ruling elites was retrieved in three countries and (b) that "malicious actors from the U.S. were insinuated exclusively by sources affiliated with Russia's elites" (p. 1). Against this backdrop, this cross-national audit of Russian-language queries seeks to assess the differences between the content spread by source pages controlled by Russia's ruling elites and the content disseminated by independent sources. Thus, we formulate our second research question as follows:

RQ2:   *In the results retrieved in response to Russian-language queries from across the five countries included in this study, did websites featuring ties with Russia's ruling elites, by comparison with*

websites without such ties, (a) spread conspiracy theories more often or (b) insinuate plotters of a different geographical origin?

The Consequences of Input Language: Comparing Russian- and English-Language Queries

In their comparative audit of the Google and Baidu image search algorithms, Paltemaa and colleagues (2020) found that the photos obtained from the results of the English-language queries were more ideologically diverse than the photos from the results of the Chinese-language queries. This finding was valid for both Google and Baidu. Moreover, both search algorithms returned more source pages based in China when Chinese search terms were used than when English search terms with the same meaning were used (for similar findings, consider Makhortykh et al., 2021; Schneider, 2018). In a similar vein, Toepfl and colleagues (2022), in their comparative audit of local language searches across five countries, found that Russian-language queries fielded from within Russia retrieved the highest share of sources connected to Russia's elites. Moreover, as Yablokov (2019) argued, Russia's ruling elites frequently instrumentalized conspiracy theories, in particular to target what they consider to be their prime opponent on the international stage, the United States. Grounded in this prior research, we hypothesize:

H1:   *When deploying Russian-language queries (by comparison with English-language queries) across the five countries, users will retrieve (a) more sources controlled by Russia's ruling elites, (b) more undebunked conspiracy theories, and (c) more conspiracy theories that blame the United States as a plotter.*

Methods

Country Selection

This study focused on five country cases that were selected for reasons of political relevance. Aside from the domestic Russian context, we audited four countries that were either (a) home to a large group of Russian-speaking citizens and/or (b) have been key target countries of Russia's foreign communication efforts: Belarus, Ukraine, Germany, and the United States. The first of these countries, Belarus, where virtually every citizen is fluent in Russian, has long been a key target country of Russia's foreign influence operations. For instance, Navumau (2020) scrutinized how a "plethora of disinformation materials" emerged in 2018 and 2019 during negotiations on the "'further integration'—that is, the process of 'political and economic absorption' of Belarus" (p. 461) into Russia. In the second country, Ukraine, where knowledge of Russian is also widespread, as early as in 2013, then President Viktor Yushchenko called upon Europe to help its country to "escape" from Russia's orbit, warning that Moscow was ready to use "whatever means to maintain a sphere of influence" (as cited in Szostek, 2018, p. 307). In both Belarus and Ukraine, throughout the 2010s, Russia undertook massive efforts to support media outlets and journalists that targeted local audiences with Russia's strategic narratives (Navumau, 2020; Szostek, 2018). Germany, as one of the European Union's most powerful members, is home to the largest community of Russian speakers in Western Europe, numbering at least 3 million (Decker, 2021; Hamann et al., 2019). Germany likewise represents a longstanding target of Russia's foreign influence efforts (Decker, 2021). The United States, our fourth country case, is, to Russia, its primary opponent on the international stage (Yablokov, 2019; Yablokov & Chatterje-Doody, 2021).

Query Choice and Data Collection

We chose to audit Russian-language queries because this study primarily aims at gauging the influence of Russia's ruling elites on Russian-language Google users living abroad. In so doing, we interpret the share of retrieved source websites, which feature connections with Russia's ruling elites, as an indicator of the (implicit, algorithm-mediated) influence of Russia's elites on Russian-speaking Google users (see the Introduction). To obtain a baseline comparison for assessing H1, we added queries in the English language. We acknowledge that the use of the English language is different across the countries of our comparison: for example, in the United States, English is the primary language used; in Germany, the English-language proficiency of the population is considered "very high," while in Ukraine and Belarus it is considered "moderate" (Education First, 2022). Despite these differences across the countries, we consider English "baseline comparison" language in this study as the most influential *lingua franca* globally, with which we compared the results of the Russian-language queries.

For the search term selection, we chose four terms that targeted COVID-19 misinformation with increasing levels of specificity: "COVID-19" (Russian-language query deployed in the audit: *коронавирус* [transliteration: *koronavirus*]), "COVID-19 truth" (Russian: *коронавирус правда* [*koronavirus pravda*]), "COVID-19 origin" (Russian: *коронавирус происхождение* [*koronavirus proischozhdenie*]), and "COVID-19 conspiracy theories" (Russian: *коронавирус теории заговора* [*koronavirus teorii zagovora*])*.* To collect the data, we created a Python script that repeated these queries at three-day intervals by sending nonpersonalized HTTP requests to Google throughout November 2020 ($N = 11$ search rounds). We focused on the month of November 2020 because in this period, the COVID-19 infection case numbers were rapidly rising in all the countries under investigation. All the queries were fielded in random order via proxy servers purchased in the countries investigated. Scraping the webpages to which the first 20 organic results linked yielded a data set of 8,800 result pages.

Data Analysis

Two human coders, fluent in English, Russian, Belarusian, German, and Ukrainian, performed manual quantitative content analysis of all the unique result pages ($N = 1,161$). Of the 4,400 English-language queries, approximately 4.9% retrieved non–English-language webpages. Of the 4,400 Russian-language queries, approximately 19.9% linked to non–Russian-language pages. Analyzing the result pages independently of their language and only for their content, the two coders established, among other things, whether at least one undebunked conspiracy theory was mentioned, which country the malignant plotters suspected behind the conspiracy were from, and whether the source website featured ties with Russia's ruling elites. The variable on the website's ties with Russia's ruling elites (V10, see Codebook: https://osf.io/6cx8h/) has three categories. To the first category, "Not connected," we assigned all websites that had no connection to Russia's ruling elites and had never been suspected of it. To the second category, "Connected to Russia's elites," we coded websites if we found credible evidence of the influence of Russia's ruling elites on the website's content. In this category, we included primarily official government websites and mass media outlets operated by the Russian government or regional authorities (e.g., 1tv.ru, ria.ru, and rt.com) or owned by individuals who work for the Russian government, by Kremlin-friendly economic elites (the so-called oligarchs), or by relatives of Kremlin-friendly oligarchs. In this study, we refer to websites in this category as "connected to, affiliated with," or "controlled

by" (with identical meanings) "Russia's ruling elites" or "the Kremlin." To the third category, "Evidence not available or contradictory," we coded websites that were suspected or publicly discussed as potentially Kremlin-affiliated, but these allegations were never verified.

Data collection and analysis for this article was conducted in the framework of a larger data-collection effort, titled "Searching for Coronavirus Conspiracy Theories Across Two Search Engines, Six countries, Six languages, and Time" (see also Toepfl et al., 2022). For a comprehensive list of all variables and how we operationalized them, please consult our Codebook (available at https://osf.io/6cx8h/). The intercoder tests of all the variables resulted in satisfactory Krippendorff's alpha values of at least .723 (for the variable *Geographical origin of the plotter*). In the supplementary online materials available here: https://osf.io/6cx8h/, we also provide results of intercoder reliability tests for all variables and additional analyses.

Findings

RQ1: Googling in Russian Abroad: The (Not Always) Negligible Consequences of Geolocation

Presence of Undebunked Conspiracy Theories

As Figure 2 shows, the proportion of undebunked conspiracy theories in the results of the Russian-language queries varied by up to approximately four percentage points between 8.64% (76 conspiratorial results) for Russia and 4.67% (41) for Ukraine. Thus, hypothetical Internet users searching from within Russia were presented with nearly twice as many conspiratorial results than Internet users googling within Ukraine. An exploratory chi square test (which we present even though we did not formulate a corresponding hypothesis) showed that the difference of four percentage points between Ukraine and Russia is significant, χ^2 (1, $N = 1,758$) = 11.1, $p < .001$. In contrast, as Figure 2 shows, the proportions of undebunked conspiracy theories are broadly similar for the contexts of Russia, Germany, and the United States.
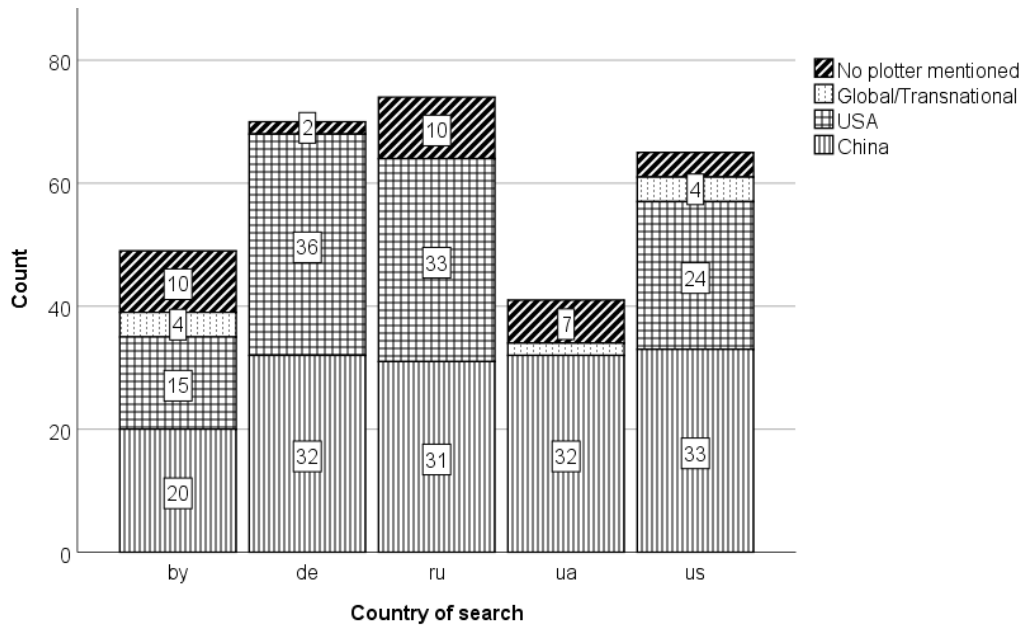
Geographical Origin of Plotters Blamed in the Undebunked Conspiracy Narratives

RQ1b shifts the focus from a simple count of conspiratorial result pages to scrutiny of the content of the conspiracy theories propagated in results of the Russian-language queries (see Figure 3). At least three observations deserve attention. First, virtually all the conspiracy theories disseminated on the result pages collected from across the five countries explicitly mentioned plotters with an identifiable geographical origin. Second, according to our data, in all but one country, the results pages blamed plotters from both China and the United States with substantial (and almost equal) frequency. Third, Ukraine is exceptional in this regard. In our audit, Russian-language queries posted from proxy servers located in Ukraine were the only ones that retrieved not a single conspiratorial narrative that suspected plotters from the United States behind the COVID-19 pandemic.
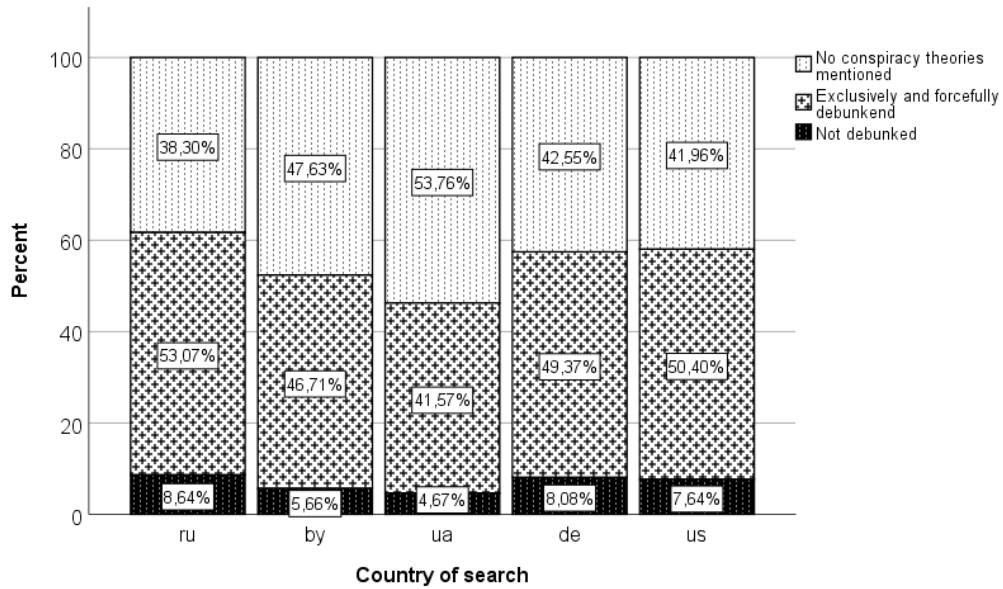
Figure 2. Proportion of conspiracy theories retrieved from the results of the Russian-language queries by country of search.

Note. N = 4,400 results of the Russian-language search queries. *N* per country = 880 results.

Figure 3. Geographical origin of plotters blamed in the conspiratorial results of the Russian-language queries.

Source Control: The Role of Kremlin-Affiliated Websites

RQ1c asks for the political actors that controlled the websites spreading conspiratorial content from among the results of the Russian-language queries. As Figure 4 shows, from all but one of the countries under investigation, the overwhelming majority of the conspiratorial result pages retrieved were connected to Russia's ruling elites. The exceptional case was, again, Ukraine. Only from within Ukraine did Russian-language searches obtain conspiratorial narratives from result pages that were not explicitly connected to Russia's ruling elites.
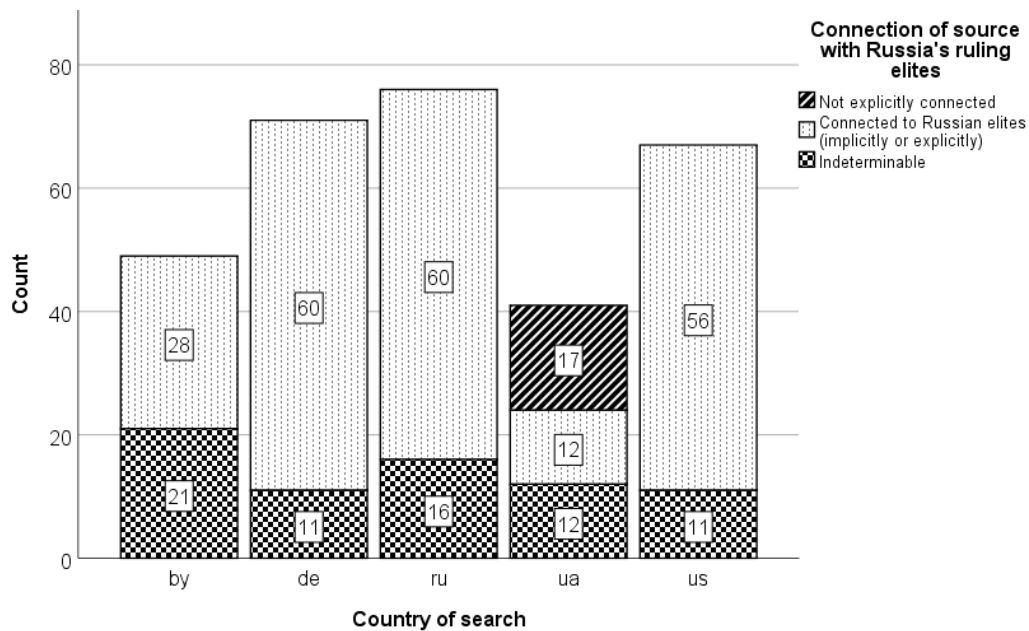
Figure 4. Relationship of web pages featuring conspiracy theories with Russia's ruling elites.

RQ2: How Sources Affiliated With the Kremlin Contribute to Spreading Conspiracy Theories

RQ2 shifts the focus from a cross-national comparison to the investigation of the role of sources connected to Russia's ruling elites. In the results of the Russian-language queries from proxy servers in the five countries, did Kremlin-affiliated webpages (a) spread conspiracy theories more often or (b) insinuate plotters of different geographical origins, in comparison to the non–Kremlin-affiliated webpages? According to our results, of all the Kremlin-affiliated webpages retrieved, approximately 14.9% spread undebunked conspiracy theories. In contrast, among the non–Kremlin-affiliated webpages, only 3.0% propagated conspiracy theories. This difference of 11.9 percentage points is statistically significant, χ^2 (1, N = 4,400) = 211.3, p < .001. Put differently, sources connected to Russia's ruling elites were almost four times more likely to spread conspiracy theories.

Did the attribution of blame differ between the two types of webpages? Of all the conspiratorial results spread by Kremlin-affiliated websites, 51.8% (108) suspected plotters from the United States of

being behind the pandemic. In contrast, none of the conspiracy narratives spread by non–Kremlin-affiliated websites blamed a U.S. plotter, χ^2 (1, N = 4,399) = 2,241.0, p < .001.

To illustrate the type of conspiratorial content, blaming the United States, which Kremlin-affiliated websites spread, let us briefly summarize the key argument of a typical news article (Pavlov, 2020) published by the Kremlin-affiliated National News Service (*Nationalnaya Sluzhba Novostey*). In this article, a deputy of the Russian parliament (*Duma*) and former Chief State Sanitary Doctor Gennadiy Onishenko expressed the idea that Chinese scientists, together with colleagues from Harvard, artificially reproduced the virus in 2015. He insinuated that the United States was operating laboratories all over the post-Soviet republics, except for the Baltic countries, and that the world could not control these laboratories. Moreover, he implied that COVID-19 was a suitable biological weapon. In no part of the article were the statements of Onishenko—who was presented as a highly reputable expert source—examined critically. Instead, the article highlighted that Russia had produced the first safe and efficient vaccine against the virus.

H1: The Consequences of Input Language: Comparing Russian- and English-Language Queries

Source Control: The Role of Kremlin-Affiliated Websites

H1a posited that people googling in Russian from across the five countries would be presented with more source pages connected to Russia's ruling elites, than people googling in English. In the results of the Russian-language queries, 33.1% (1,455) of the source pages were connected to Russian elites, in contrast to only 3.8% (166) of the results of the English-language queries. This difference of 29.3 percentage points is statistically significant, χ^2 (1, N = 8,787) = 1,253, p < .001. Thus, H1a is confirmed.

Presence of Undebunked Conspiracy Theories

H1b assumed that the Russian-language queries will return more undebunked conspiracy theories than the English-language queries. Among the result pages retrieved in response to Russian-language queries across the five countries, 6.94% disseminated undebunked conspiracy theories; and among the results of the English-language queries, 6.57%. The difference between the two proportions is not statistically significant, χ^2 (1, N = 8,608) = 4.64, p = .496. Thus, H1b is rejected. Hypothetical Internet users googling in Russian and English were presented with approximately the same number of conspiracy narratives.

Geographical Origin of Plotters Blamed in the Undebunked Conspiracy Narratives

H1c posited that in the results of the Russian-language queries containing undebunked conspiratorial content more plotters from the United States will be suspected than in the results of the English-language queries. According to our findings for English-language queries, 5.76% (16) of all conspiratorial results blamed a plotter from the United States. In contrast, among the results of the Russian-language queries, more than a third (35.53%, 108) did so. This difference of approximately 30 percentage points is statistically significant, χ^2 (1, N = 582) = 76.8, p < .001. Thus, H1c is confirmed.

Discussion

Auditing Google's Web Search Algorithm for COVID-19 Conspiracy Theories

This study systematically investigated how a disinformation issue of global political relevance (i.e., conspiracy theories about the origin of the COVID-19 pandemic) in Google web search results varied across (1) five national geolocations and (2) based on the language of the query term (Russian vs. English). About the contribution of the Google algorithm to the spread of undebunked conspiracy theories, two conclusions can be drawn. First, among our aggregate results across the five countries, more than 6% of both the Russian- and English-language queries referred users to webpages featuring undebunked conspiracy theories (see RQ1a, H1b). As these results indicate, despite Google's strong public commitment to fighting COVID-19-related misinformation, the visibility of referrals to undebunked conspiracy narratives in this audit was still substantial. Nevertheless, extant comparative research across different search engines indicated that Google may perform better than its competitors, retrieving fewer misinformative results on COVID-19-related queries than other major web search engines, including the Russia-based search engine *Yandex* (Makhortykh et al., 2020).

Second, even though Google announced as early as in 2017 that it would derank Russia's official foreign communication outlets RT and Sputnik (Hern, 2017), the company has not taken similarly rigorous steps about domestic Russian sources that have ties with the Kremlin. In our audit, this resulted in the high visibility of Kremlin-affiliated webpages in the results of the Russian-language queries (33.1% vs. only 3.8% for the English-language queries; see H1a). Considering Google's declared goal of curbing the spread of disinformation, this high visibility of Kremlin-affiliated websites in Google search results is problematic for at least two reasons. First, in our analysis, across the five national contexts and two languages audited, Kremlin-affiliated webpages were almost five times more likely to disseminate undebunked conspiracy theories than non–Kremlin-affiliated webpages (RQ2a). Second, the Kremlin-affiliated websites disseminated conspiracy theories that attributed blame in a very characteristic way: they were the only source webpages in our data set that suspected U.S. plotters behind the pandemic. In contrast, not a single non–Kremlin-affiliated website insinuated a plotter from the United States (see RQ2b). Put differently, in our data set, Kremlin-affiliated websites not only significantly contributed to the spread of conspiracy theories but also amplified very characteristic, politicized narratives about who were the malignant actors behind the alleged conspiracies (see also Toepfl et al., 2022).

Shielding National Democratic Public Spheres: Ukraine as an Exceptional Case

As our findings demonstrate, the national geolocation from which Russian-language queries were fielded did not result in fundamentally different patterns for four of the five countries. It had no substantial impact on the amount of, and the attribution of blame in, the COVID-19 conspiracy narratives retrieved, whether Russian-language users googled from Russia, from Germany, from the United States, or from Belarus. In contrast, Russian-language queries submitted from Ukraine returned distinct result patterns of substantially fewer conspiracy theories, fewer sources connected to Russia's ruling elites, and fewer conspiracy narratives blaming U.S. plotters. The deviant patterns of the results of the Russian-language queries from within Ukraine were most likely because of a "whole raft of legislative and regulatory changes that have been introduced in

Ukraine since the 'revolution of dignity' [2013–14] to reduce consumption of all kinds of Russian media content" (Szostek, 2018, p. 15). After the annexation of the Crimean Peninsula by Russia in 2014, Ukrainian leaders officially considered Russian propaganda a major threat to the country's national security. The Ukrainian government blocked access to Russia's partly state-controlled search engine Yandex, Russia's social networks Vkontakte and Odnoklassniki, and a broad range of popular Russian news outlets (*Moscow Times*, 2021). As the results of our transnational search engine audit demonstrate, these policies aimed at reducing Russia's informational influence on the domestic Ukrainian public sphere achieved their goals—and not only for citizens who sought to directly access the blocked websites of Russian origin. In addition, the restrictive measures were reflected in the search results that we obtained in response to the query terms on information about COVID-19. Speaking metaphorically, Ukraine's policies thus—at least partly—closed for the Ukrainian audience a popular "side door" (Newman et al., 2021, p. 23) to Russian news.

At a more abstract level, it may be argued that the Ukrainian case illustrates the possibility of shielding search results retrieved from the territory of a nation-state from powerful foreign-language news outlets, as well as from powerful foreign actors. That said, the normative assessment of Ukraine's media policies has been highly controversial, with some Press Freedom advocacy organizations taking a critical stance (Reporters Without Borders, 2021). Countering this critique, Richter (2015) argued that extant national and international legal norms do offer rationales for justifying regulatory measures as those taken by the Ukrainian government, as well as, policies implemented with similar intent by the Baltic states. For instance, according to Richter (2015), "provisions on national security and its relatively new component, informational security," served "as a basis for decisions taken in Ukraine and Latvia" (Richter 2015, p. 3138). Shortly after Russia's invasion of Ukraine on February 24, 2022, several European states and the European Union implemented a series of additional policies to further curb the spread of Russia-sponsored disinformation online. These included most prominently European Union sanctions that "cover all means for the transmission and distribution of RT [formerly Russia Today] content, including on social media and search engines" (Balint, Arcostanzo, Wildon, & Reyes, 2022, n.p.). Assessment of the consequences of these policies is a promising topic for future transnational search engine audits.

Googling in Russian Abroad: The Influence of Russia's Ruling Elites

If the Ukrainian case is exceptional, how large was the Kremlin's influence on the results of the Russian-language queries from the three remaining countries? In our audit (H1a), the search results obtained from the three other countries were heavily penetrated by Kremlin-affiliated websites. Consequently, Russia's elites had significant influence on how the pandemic appeared in search results retrieved by Russian speakers abroad (see Figure 4). However, this influence did not lead to an overall larger proportion of undebunked conspiracy narratives identified from the results of the Russian-language queries, at least in comparison with the results of the English-language query results (H1b). Yet, Internet users googling in Russian were presented with conspiracy narratives of different ideological orientations. In the Russian-language query results, plotters from the United States were suspected almost seven times more frequently. Kremlin-affiliated sources were responsible for this pattern: they were the only ones to accuse U.S. plotters at all. These result patterns are broadly in line with prior observations by Russian studies scholars who argued that Russia's state-controlled media sources presently tend to "depict a world

where most problems can be traced back to aggressive American unilateralism" (Szostek, 2018, p. 10; see also Toepfl et al., 2022).

With Ukraine as exceptional case, Russian-language Google searches conducted outside and inside Russia revealed similar results (see Figures 2–4). An analogous observation was made by Paltemaa and colleagues (2020) in their audit of the image search engine of China's Baidu search engine. As these scholars concluded, "Baidu users are therefore sucked into the information bubble that Chinese online censorship creates even if the users are outside mainland China" (Paltemaa et al., 2020, p. 2071). This conclusion is also valid, as our findings illustrate, for Russian speakers googling COVID-19 information from abroad. When searching the web in the Russian language, citizens (or residents) of democratic countries immerse themselves in an informational sphere dominated by sources that act in concordance with Russia's authoritarian elites. This has a multitude of political consequences. First, in the context of global calamities such as the COVID-19 pandemic, Russia's elites have the power to influence not only the extent of the disinformation retrieved in Russian-language search results but also the attribution of blame in the content retrieved (see RQ2). Second, there is no reason to believe that the patterns of our audit should not be broadly generalizable to a range of other subject areas. In search results targeting controversial foreign policy issues, such as the annexation of Crimea or energy policies, Russian-language search results can be expected to be heavily biased toward the positions of Russia's ruling elites. Likewise, search results in response to query terms targeting controversies about basic democratic and political values, such as LGBTQ rights, can be assumed to reflect the positions of Russia's authoritarian elites—which, in many cases, will contradict the consensus on which public life in Western societies is built (Yablokov, 2019; Yablokov & Chatterje-Doody, 2021).

Concerns about the consumption of Russian state-controlled media among Russian-language communities in Europe are not new and have been raised in extant research, particularly in studies about the large Russian-speaking communities in the Baltic states (Erbsen, 2019; Vihalemm & Juzefovičs, 2021; Yablokov & Chatterje-Doody, 2021). However, this research has primarily drawn on traditional methods of social science, including qualitative interviews and surveys (Vihalemm & Juzefovičs, 2021) as well as discourse analysis (Erbsen, 2019) of Russian-language media. The present study adds to this literature by demonstrating that searching the web, as one of the most popular "side door[s]" (Newman et al., 2021, p. 23) to the news, likewise results in meaning patterns that are biased toward the interests of Russia's elites. In the case of search results, this bias can be considered particularly problematic because Internet users typically consider search engines the most trusted source of news, above social media and video sites (Newman et al., 2021, p. 12).

Algorithmic Audits: Beyond the Westphalian Imaginary

To gauge how search algorithms mediate multilingual and cross-national flows of political information, auditing research needs to adopt transnational and multilingual research designs. In contrast, extant audits tend to remain implicitly informed by what leading public sphere theorist Nancy Fraser (2007) classically described as a "Westphalian political imaginary" (p. 8)—an imaginary that narrowly focuses on the nation-state and its territorial borders as an underlying analytical frame. For example, extant auditing research is typically grounded in the tacit assumptions that public debate in modern democracies is

conducted exclusively (1) in only one (national) language by (2) members of only one (national language) community who (3) search the web from within the territorial borders of only one (nation-)state (see, for instance, Kravets & Toepfl, 2021; Makhortykh et al., 2021; Puschmann, 2019; Urman et al., 2021). Moreover, extant audits commonly presume (4) a national communications infrastructure that is visible—somewhat paradoxically—in research designs that do not interrogate the geographical origin of result pages but assume domestic national origin by default (Hussein et al., 2020; Kravets & Toepfl, 2021). Furthermore, an underlying Westphalian imaginary materializes frequently in an exclusive focus on (5) topics of relevance to national governments such as national election campaigns (Puschmann, 2019; Urman et al., 2021), national "current political issues" (Steiner et al., 2020, p. 1), or politically sensitive events (Kravets & Toepfl, 2021; Paltemaa et al., 2020). Finally, the political consequences of result patterns are also commonly discussed with a view toward (6) their normative consequences only for national politics. Examples include the normative goals of "healthy democracies" (Steiner et al., 2020, p. 2) and the fairness of national election campaigns (Puschmann, 2019; Urman et al., 2021).

Although certainly not all extant audits are informed by a national imaginary to the same degree and in all respects (Paltemaa et al., 2020; Toepfl et al., 2022), this study explicitly sought to at least render visible these implicit assumptions and sensitize researchers to the consequences of the Westphalian lens. Transnational elements of the research design of this study include the following: (1) we deployed query terms with the same meaning in two languages and (2) we focused on audience communities that received news in a language that was not the official language of the nation-states they inhabited. Moreover, (3) we systematically varied the country from which the queries were fielded, and (4) we coded the national geographical origin of the source pages as well as the ties of these source pages to the leadership of a specific nation-state, that is, Russia. Finally, (5) we focused on COVID-19 disinformation as an issue faced by virtually all national governments across the world.

Limitations and Promising Paths for Future Research

This study had limitations. First, it was based on the results of queries in only five national geolocations. To investigate the degree to which the findings can be generalized to other sociopolitical contexts, future research needs to audit queries fielded from within other post-Soviet countries that are home to large numbers of Russian speakers, such as the Baltic states. Second, this study focused on only one issue (i.e., COVID-19 conspiracy theories). To understand more fully how search algorithms contribute to the flow of political information across national borders, further transnational audits are required that deploy search terms targeting other controversial issues (e.g., climate change or LGBTQ rights) in other languages (e.g., Chinese or Arabic). Third, this research considered only one search algorithm, Google web search. Future research needs to audit other algorithms, including those of platforms with close ties to Russia's ruling elites, such as Yandex, which is widely used across the Eurasian region (Kravets & Toepfl, 2021; Wijermars, 2021). Fourth, as with any audit, this study was based only on information retrieval. To create a deeper understanding of the social consequences of search engines as technological artefacts, complementary research should be conducted that adopts alternative methods, including qualitative interviews, population-based surveys, and experiments. This research can also create contextualized knowledge about how different communities of Internet users navigate, select, make sense of, and are impacted by the ideologically highly diverse sets of search engine results that they obtain when searching

in different languages and from different geolocations. For instance, as Juzefovičs and Vihalemm (2020) convincingly demonstrated, Baltic Russian speakers are certainly not a "uniform, monolithic group" (p. 265). Neither will all members of this group be immersed in equal measure in the informational sphere controlled by Russia's ruling elites, nor will they be in equal measure susceptible to all types of propagandistic messages. Finally, and perhaps most importantly, this study has focused on the generation of empirical results. However, as we became aware of when discussing the implications of these findings, the discipline of communications lacks a well-founded theoretical debate on an entire series of normative questions of pressing relevance, arising around the legitimacy of transnational flows of political information. For instance, how are we to evaluate the restrictive policies taken by the governments of Ukraine, the Baltic states, and, most recently, the European Union to curb Russia's informational influence? Under which conditions, for what reasons, and by which means should democratic nation-states be entitled to shield their online public spheres from the influence of foreign actors (Richter, 2015)? If, for instance, Russian-language media content is banned or restricted from circulation (Balint et al., 2022), how can we mitigate the detrimental consequences of this "securitisation" (Juzefovičs & Vihalemm, 2020, p. 265) of media use and identities of Russian-speaking citizens? These are thorny questions for theories of democratic communication. However, in times of rising levels of international conflicts and propaganda, these and related theoretical questions need to be raised, weighed, and answered.

References

Balint, K., Arcostanzo, F., Wildon, J., & Reyes, K. (2022, July 20). *RT articles are finding their way to European audiences—But how?* Institute for Strategic Dialogue. Retrieved from https://www.isdglobal.org/digital_dispatches/rt-articles-are-finding-their-way-to-european-audiences-but-how/

Bandy, J. (2021). Problematic machine behavior: A systematic literature review of algorithm audits. *Proceedings of the ACM on Human-Computer Interaction, 5*(CSCW1), 1–34. doi:10.1145/3449148

Bode, L., & Vraga, E. K. (2015). In related news, that was wrong: The correction of misinformation through related stories functionality in social media. *Journal of Communication, 65*(4), 619–638. doi:10.1111/jcom.12166

Decker, P. K. (2021). "We show what is concealed": Russian soft power in Germany. *Problems of Post-Communism, 68*(3), 216–230. doi:10.1080/10758216.2020.1753082

Douglas, K. M., Uscinski, J. E., Sutton, R. M., Cichocka, A., Nefes, T., Ang, C. S., & Deravi, F. (2019). Understanding conspiracy theories. *Political Psychology, 40*(S1), 3–35. doi:10.1111/pops.12568

Dutton, W. H., Reisdorf, B. C., Dubois, E., & Blank, G. (2017). *Search and politics: The uses and impacts of search in Britain, France, Germany, Italy, Poland, Spain, and the United States* (Quello Center Working Paper No. 5-1-17). Michigan State University Project "The Part Played by Search in Shaping Political Opinion". Retrieved from https://ssrn.com/abstract=2960697

Education First (EF). (2022). *EPI 2022—EF English Proficiency Index.* Retrieved from https://www.ef.com/wwen/epi/

Ehrett, C., Linvill, D. L., Smith, H., Warren, P. L., Bellamy, L., Moawad, M., . . . Moody, M. (2021). Inauthentic newsfeeds and agenda setting in a coordinated inauthentic information operation. *Social Science Computer Review*. Advance online publication. doi:10.1177/08944393211019951

Erbsen, H. (2019). A parallel yet divided information space: Testing the overlap of Yandex Russian language news media discourses in Estonia, Latvia, and Russia. *Russian Journal of Communication, 11*(3), 217–239. doi:10.1080/19409419.2019.1673203

Eurostat. (2019). *Foreign language skills statistics*. Eurostat. Retrieved from https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Foreign_language_skills_statistics#Number_of_foreign_languages_known

Fraser, N. (2007). Transnationalizing the public sphere: On the legitimacy and efficacy of public opinion in a post-Westphalian world. *Theory, Culture & Society, 24*(4), 7–30. doi:10.1177/0263276407080090

Google Trends. (2022, July 21). *изнасилование,Лиза* [Rape, Lisa]. Google Trends. Retrieved from https://trends.google.com/trends/explore?date=2015-07-01%202016-07-01&geo=DE&q=изнасилование,Лиза

Ha, L., Andreu Perez, L., & Ray, R. (2021). Mapping recent development in scholarship on fake news and misinformation, 2008 to 2017: Disciplinary contribution, topics, and impact. *American Behavioral Scientist, 65*(2), 290–315. doi:10.1177/0002764219869402

Hamann, K., Witzlack-Makarevich, K., & Wulff, N. (2019). Russian in Germany. In A. Mustajoki, E. Protassova, & M. Yelenevskaya (Eds.), *The soft power of the Russian language* (pp. 163–174). London, UK: Routledge.

Hern, A. (2017, November 21). Google plans to 'de-rank' Russia Today and Sputnik to combat misinformation. *The Guardian*. Retrieved from http://www.theguardian.com/technology/2017/nov/21/google-de-rank-russia-today-sputnik-combat-misinformation-alphabet-chief-executive-eric-schmidt

Hussein, E., Juneja, P., & Mitra, T. (2020). Measuring misinformation in video search platforms: An audit study on YouTube. *Proceedings of the ACM on Human-Computer Interaction, 4*(CSCW1), 1–27. doi:10.1145/3392854

Juzefovičs, J., & Vihalemm, T. (2020). Keeping channels open or screening out? The digital practices of Baltic Russian-speakers during the Russia–Ukraine conflict. *Russian Journal of Communication, 12*(3), 262–283. doi:10.1080/19409419.2020.1851454

Kliman-Silver, C., Hannak, A., Lazer, D., Wilson, C., & Mislove, A. (2015). Location, location, location: The impact of geolocation on web search personalization*.* In *Proceedings of the 2015 Internet Measurement Conference* (pp. 121–127). New York, NY: Association for Computing Machinery. doi:10.1145/2815675.2815714

Kravets, D., & Toepfl, F. (2021). Gauging reference and source bias over time: How Russia's partially state-controlled search engine Yandex mediated an anti-regime protest event. *Information, Communication & Society, 25*(15), 2207–2223. doi:10.1080/1369118X.2021.1933563

Makhortykh, M., Urman, A., & Ulloa, R. (2020). How search engines disseminate information about COVID-19 and why they should do better. *Harvard Kennedy School Misinformation Review, 1*(3), 1–12. doi:10.37016/mr-2020-017

Makhortykh, M., Urman, A., & Ulloa, R. (2021). Hey, Google, is it what the Holocaust looked like? Auditing algorithmic curation of visual historical content on web search engines. *First Monday, 26*(10). doi:10.5210/fm.v26i10.11562

Meister, S. (2016, July 25). The "Lisa case": Germany as a target of Russian disinformation. *NATO Review*. Retrieved from https://www.nato.int/docu/review/articles/2016/07/25/the-lisa-case-germany-as-a-target-of-russian-disinformation/index.html

Moscow Times. (2021, August 23). Ukraine blocks access to popular Russian news sites. *Moscow Times*. Retrieved from https://www.themoscowtimes.com/2021/08/23/ukraine-blocks-access-to-popular-russian-news-sites-a74870

Mustajoki, A., Protassova, E., & Yelenevskaya, M. (Eds.). (2019). *The soft power of the Russian language: Pluricentricity, politics and policies*. London, UK: Routledge. doi:10.4324/9780429061110

Navumau, V. (2020). Integration or absorption? Analyzing the propagandist narratives generated by Russia-backed online regional media in Belarus. *Demokratizatsiya: The Journal of Post-Soviet Democratization, 28*(3), 461–484. Retrieved from https://www.muse.jhu.edu/article/762317

Newman, N., Fletcher, R., Schulz, A., Andi, S., Robertson, C. T., & Nielsen, R. K. (2021). *Reuters Institute digital news report 2021*. Reuters Institute for the Study of Journalism. Retrieved from https://ssrn.com/abstract=3873260

Ørmen, J. (2019). Not so distinct after all: Assessing social stratification of news users on the web. *Journalism Studies, 20*(11), 1653–1670. doi:10.1080/1461670X.2018.1539342

Paltemaa, L., Vuori, J. A., Mattlin, M., & Katajisto, J. (2020). Meta-information censorship and the creation of the Chinanet Bubble. *Information, Communication & Society, 23*(14), 2064–2080. doi:10.1080/1369118X.2020.1732441

Pavlov, S. (2020, August 17). *Otkuda vzyalsya COVID-19?* [Where did COVID-19 come from?]. Natsionalnaya Sluzhba Novostey. Retrieved from https://nsn.fm/society/otkuda-vzyalsya-covid-19-novye-gipotezy-starye-podozreniya

Puschmann, C. (2019). Beyond the bubble: Assessing the diversity of political search results. *Digital Journalism, 7*(6), 824–843. doi:10.1080/21670811.2018.1539626

Radnitz, S. (2021). *Revealing schemes: The politics of conspiracy in Russia and the post-Soviet region*. Oxford, UK: Oxford University Press. doi:10.1093/oso/9780197573532.001.0001

Reporters Without Borders. (2021, February 26). *Ukraine escalates "information war" by banning three pro-Kremlin media*. Reporters Without Borders. Retrieved from https://rsf.org/en/news/ukraine-escalates-information-war-banning-three-pro-kremlin-media

Richter, A. G. (2015). Legal response to propaganda broadcasts related to crisis in and around Ukraine, 2014–2015. *International Journal of Communication, 9*, 3125–3145.

Sablina, L. (2021). We should stop the Islamisation of Europe!: Islamophobia and right-wing radicalism of the Russian-speaking Internet users in Germany. *Nationalities Papers, 49*(2), 361–374. doi:10.1017/nps.2019.76

Schneider, F. (2018). *China's digital nationalism*. Oxford, UK: Oxford University Press. doi:10.1093/oso/9780190876791.001.0001

Statista. (2021). *Share of desktop search traffic originating from Google in selected countries as of April 2021*. Statista. Retrieved from https://www.statista.com/statistics/220534/googles-share-of-search-market-in-selected-countries

Steiner, M., Magin, M., Stark, B., & Geiß, S. (2020). Seek and you shall find? A content analysis on the diversity of five search engines' results on political queries. *Information, Communication & Society, 25*(2), 217–241. doi:10.1080/1369118X.2020.1776367

Sunstein, C. R., & Vermeule, A. (2009). Conspiracy theories: Causes and cures. *Journal of Political Philosophy, 17*(2), 129–252. doi:10.1111/jopp.2009.17.issue-2

Szostek, J. (2018). The mass media and Russia's "sphere of interests": Mechanisms of regional hegemony in Belarus and Ukraine. *Geopolitics, 23*(2), 307–329. doi:10.1080/14650045.2017.1402298

Toepfl, F., Kravets, D., Ryzhova, A., & Beseler, A. (2022). Who are the plotters behind the pandemic? Comparing COVID-19 conspiracy theories in Google search results across five key target countries of Russia's foreign communication. *Information, Communication & Society*, 1–19. doi:10.1080/1369118X.2022.2065213

Urman, A., Makhortykh, M., & Ulloa, R. (2021). The matter of chance: Auditing web search results related to the 2020 U.S. presidential primary elections across six search engines. *Social Science Computer Review, 40*(5), 1323–1339. doi:10.1177/08944393211006863

U.S. Department of State. (2020). *GEC special report: Russia's pillars of disinformation and propaganda*. Retrieved from https://www.state.gov/russias-pillars-of-disinformation-and-propaganda-report/

Vihalemm, T., & Juzefovičs, J. (2021). Sense-making of conflicting political news among Baltic Russian-speaking audiences. *National Identities, 23*(3), 253–275. doi:10.1080/14608944.2020.1723512

Vraga, E. K., & Bode, L. (2020). Defining misinformation and understanding its bounded nature: Using expertise and evidence for describing misinformation. *Political Communication, 37*(1), 136–144. doi:10.1080/10584609.2020.1716500

Wijermars, M. (2021). Russia's law "on news aggregators": Control the news feed, control the news? *Journalism, 22*(12), 2938–2954. doi:10.1177/1464884921990917

Yablokov, I. (2019). Conspiracy theories in post-Soviet Russia. In J. Uscinski (Ed.), *Conspiracy theories and the people who believe them* (pp. 360–371). Oxford, UK: Oxford University Press. doi:10.1093/oso/9780190844073.003.0024

Yablokov, I., & Chatterje-Doody, P. N. (2021). *Russia today and conspiracy theories: People, power and politics on RT*. London, UK: Routledge. doi:10.4324/9780367224684