# Fake News for All: How Citizens Discern Disinformation in Autocracies

Anton Shirikov\*

#### Abstract

Research on autocracies often posits that propaganda can manipulate citizens' beliefs, but existing work does not systematically investigate how well individuals recognize misinformation in authoritarian environments and whether susceptibility to propaganda is related to vulnerability to false news. I present the results of four surveys in Russia, in which more than 60,000 participants evaluated 74 true and false news headlines. I find that Russians' capacity to discern falsehoods is comparable to discernment found in other political contexts, and they could often detect false news stories. However, consumers of state media gave less accurate evaluations than consumers of independent media, and government supporters were substantially more susceptible to pro-regime misinformation than opposition-minded citizens. Supporters also strongly rejected true messages inconsistent with their political dispositions. These results help understand why in environments dominated by propaganda individuals can be quite vulnerable to information manipulation. At the same time, regime critics in my study often fell for propaganda-inconsistent falsehoods. These results highlight the broader challenge of fighting misinformation and propaganda in a situation when many citizens exhibit political biases.

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<sup>\*</sup>Postdoctoral Scholar in Russian Politics at the Harriman Institute, Columbia University, dr.shirikov@ gmail.com. I am grateful to Scott Gehlbach, Yoshiko Herrera, Rikhil Bhavnani, Jessica Weeks, Adeline Lo, Quintin Beazer, Holger Kern, Bryn Rosenfeld, Andrew Little, Jon Green, Noah Buckley, Georgiy Syunyaev, Mingcong Pan, to the participants at the ASEEES annual meeting (2020) and various colloquia and conferences at the University of Wisconsin–Madison, as well as two anonymous reviewers for their helpful comments and suggestions. I acknowledge financial support from the Harriman Institute (Columbia University), the Department of Political Science, the Center for Russia, East Europe, and Central Asia, and the Office of the Provost (all at UW–Madison). This work was also assisted by a dissertation writing grant from the Association for Slavic, East European, and Eurasian Studies.

The world faces an epidemic of misinformation (Allcott and Gentzkow 2017; Lazer et al. 2018; Guess, Nagler, and Tucker 2019; Tsfati et al. 2020). While the research on the causes of this epidemic is growing rapidly, it mostly ignores authoritarian regimes where citizens have extensive experience dealing with misinformation spread by governments. Social scientists have examined the information manipulation strategies that autocrats use (Rozenas and Stukal 2019; Sanovich, Stukal, and Tucker 2018), but how citizens detect propaganda and disinformation in these regimes is poorly understood.

Many studies find that propaganda can effectively impose its narratives on citizens (see e.g., Adena et al. 2015; Bleck and Michelitch 2017; Stockmann and Gallagher 2011; Yanagizawa-Drott 2014; Szostek 2017), although why exactly citizens are vulnerable to these narratives is not always clear. Other work argues that citizens of autocracies are often skeptical about state-sponsored messages (Mickiewicz 2008; Wedeen 1999; Huang 2018). However, neither research considers susceptibility to falsehoods specifically or ability to discern between true and false messages. Other studies of autocracies have examined the spread of health misinformation (Chen et al. 2020), conspiracy theories, rumors, and rebuttals (Radnitz 2021; Huang 2015; Wang and Huang 2021) in authoritarian contexts, but that work also does not measure citizens' capacity to discern falsehoods.

This paper investigates how citizens in an authoritarian regime discern false and true news stories and what individual characteristics are associated with more accurate news evaluations. My study is the first attempt to investigate these questions systematically in an autocracy. Arechar et al. (2022) examine citizens' capacity to identify misinformation in sixteen countries, including some autocracies, but that study only includes news headlines about COVID-19, not more general news content or stories typically spread by state propaganda, and it does not systematically consider authoritarian media environments.

I draw both on the studies of authoritarian propaganda and on the recent research that investigates vulnerability to false news (Pennycook and Rand 2019a; Guess, Nagler, and Tucker 2019). Following these literatures, I identify several individual characteristics that may improve or impede citizens' capacity to judge news stories in authoritarian environments, including the patterns of news consumption, sociodemographic characteristics, and political dispositions. I examine how well citizens that vary along these dimensions determine the veracity of different kinds of news stories, including propaganda messages and the reporting of independent media.

My study is situated in Russia, an authoritarian regime that has extensively used propaganda and disinformation (Lipman, Kachkaeva, and Poyker 2018) to manipulate public opinion. I examine Russians' capacity to recognize misinformation using four diverse surveys. Two of these surveys were unique large-scale online studies (total  $n \approx 60,000$ ), conducted in 2019 and 2020. These surveys were designed and promoted as quizzes that offered the participants a chance to test how well they recognize fake news. My research design has several important features that place respondents in a situation similar to real-world news consumption, encourage them to consider a large and diverse set of news stories, and reduce the potential social desirability bias. The studies asked citizens to evaluate more than 70 news messages about politics, the economy, and other issues, including a random selection of headlines from Russia's largest news aggregator, *Yandex News.* In total, I examine more than 1 million decisions on the veracity of news stories. I also conducted two supplementary surveys containing analogous news evaluation tasks: One was fielded in 2019 on a nationally representative sample ( $n \approx 1,600$ ), and the other was fielded in 2020 on a diverse Russian online panel ( $n \approx 2,100$ ).

Even though Russians live in an environment dominated by propaganda and statesponsored disinformation, I find that their capacity to distinguish between true and false stories is roughly comparable to discernment ability established in other political contexts, such as the United States. In particular, Russian respondents could fairly often discern false news, although they had difficulty with certain false messages. Still, correctly recognizing true messages was a more common challenge for respondents, which may reflect an underlying pattern of skepticism about news information.

Respondents who regularly consumed news from state-run outlets, moreover, gave on average less accurate evaluations than respondents who relied on independent, critical media. While consumers of state media were not far behind other participants, this finding suggests that exposure to authoritarian propaganda may undermine news discernment.

However, a key predictor of the capacity to recognize falsehoods, and thus a key factor of vulnerability to authoritarian propaganda, was whether news stories in question were congruent with respondents' political dispositions. Opposition-minded Russians, especially those who consumed independent media, were substantially less susceptible to false propaganda stories than were regime supporters. Thus, my findings contribute to the research on misinformation and the ability to detect it (Pennycook and Rand 2019b, 2019a; Guess et al. 2020; Lyons et al. 2021), extending this research to authoritarian settings. My analysis also expands our understanding of "informational autocracies" (Guriev and Treisman 2019), showing that such regimes can effectively promote false propaganda messages by exploiting citizens' political biases.

Regime supporters were also strongly averse to critical, propaganda-inconsistent messages, even if these messages were true. Thus, independent reporting is less of a threat to autocrats when pro-regime citizens themselves reject such information (Robertson 2015).

It is important to note that supporters were still capable of discerning falsehoods, but they were more prone to error when evaluating political stories. Then, it is possible that if the supply of false propaganda is reduced, and pro-regime citizens find themselves in a more neutral information environment, they would err less often.

Finally, scholarship on autocracies sometimes implies that opposition-minded citizens are more informed and discerning (Reuter and Szakonyi 2015; Huang and Yeh 2017). In my analysis, however, opposition-minded citizens were also prone to false stories consistent with their political dispositions. Thus, my study adds to the emerging consensus that susceptibility to like-minded falsehoods is a universal flaw (Flynn, Nyhan, and Reifler 2017; Ditto et al. 2018) and highlights the broader challenge of fighting misinformation and propaganda in a situation when many citizens exhibit political biases.

# 1 Detecting Falsehoods in Autocracies: Who Is More Resistant to Misinformation?

Scholars of authoritarian regimes have long wondered how citizens respond to information manipulation by their governments, and whether exposure to state propaganda affects how individuals process news information. Many studies of propaganda find that it can affect political attitudes and behavior (Geddes and Zaller 1989; Adena et al. 2015; Bleck and Michelitch 2017; Stockmann and Gallagher 2011; Yanagizawa-Drott 2014; Szostek 2017). However, while considering the effects of exposure to state media or certain propaganda narratives, this work does not distinguish between true and false messages. Therefore, it remains unclear how vulnerability to propaganda is related to citizens' capacity to distinguish between truths and falsehoods and their susceptibility to false information.

Other scholars argue that even in such manipulated environments, citizens maintain critical capacity and an ability to extract useful information from news reporting (Koch 2013; Rosenfeld 2018). Some even suggest that the experience of propaganda can prompt citizens to become more skeptical and discerning news consumers, as they learn to anticipate bias in the news (Mickiewicz 2008).

However, citizens may also respond to propaganda by withdrawing from politics and refusing to carefully consider news information (Meyen and Schwer 2007; Zhelnina 2020). Individuals in such regimes often report informational helplessness, an inability to make sense of the news (Alyukov 2022). Moreover, the skepticism described by Mickiewicz (2008) and others may be counterproductive: If citizens are skeptical about everything,

they may "detect" falsehoods but fail to recognize true messages. Autocratic leaders can, in fact, deliberately undermine trust in any information (Pearce and Kendzior 2012) in order to foster confusion, helplessness, or indiscriminate cynicism.

In the analysis below, I consider how accurately citizens in an authoritarian country such as Russia evaluate different kinds of true and false news messages. I also consider whether citizens are overly credulous or prone to excessive skepticism, as described above.

I explore a variety of theoretical predictions about the factors that can improve or undermine citizens' capacity to evaluate correctly news content in the authoritarian context. I build both on the research on news processing in autocracies and on the studies of misinformation in other countries. In some cases, both strands of research converge on the same predictions, but in other cases, they suggest diverging expectations.

I start from factors related to media use, the first of which is the consumption of authoritarian propaganda via state media. Some research finds stronger misperceptions among citizens who rely on partisan media (Jamieson and Albarracin 2020; Weeks et al. 2021). State media outlets in autocracies can be seen as hyperpartisan media that relentlessly promote the government line and push falsehoods without hesitation.<sup>1</sup> The repetition of false narratives by these media can make their consumers more likely to believe false statements (Pennycook, Cannon, and Rand 2018). At the same time, some aforementioned research on autocracies suggests that exposure to state propaganda may teach citizens to be more discerning news consumers. If so, consumers of state media would evaluate news more accurately. I aim to distinguish between these possibilities.

Another potentially important factor is the variety of news sources one uses. News literacy recommendations often include a suggestion to consult multiple information sources.<sup>2</sup> News consumers in autocracies themselves say that it is important to compare how different media cover the same topics (Mickiewicz 2008). There is no clear evidence,

 $<sup>^1\</sup>mathrm{I}$  use the terms "state media" and "propaganda outlets" interchangeably.

<sup>&</sup>lt;sup>2</sup>https://www.facebook.com/help/188118808357379

however, on whether following this recommendation indeed improves the quality of news processing. I will consider whether Russians who use more news sources or a greater variety of news sources determine true and false stories more accurately.

Further, studies of political information processing suggest that citizens treat likeminded messages favorably while being more skeptical about incongruent news (Taber and Lodge 2006; Jerit and Barabas 2012; Schaffner and Luks 2018). This phenomenon has rarely been tested in autocracies (Robertson 2015), and it is unclear to what extent such political biases affect vulnerability to misinformation. An optimist might hope that political biases do not prevent citizens from recognizing outright disinformation, especially as propaganda's deception efforts are well-known. A pessimist, however, might argue that misinformation is processed through the same political lens as are other kinds of news stories. Then, pro-regime citizens would be vulnerable to false propaganda messages, whereas opposition-minded citizens would more easily recognize such false propaganda. The opposite pattern should be in place for false critical (propaganda-inconsistent) messages: Regime critics would be prone to such stories, but regime supporters would recognize them as false. Similarly, citizens would be more likely to recognize true politically congruent messages but less likely to recognize politically incongruent truths.

Sociodemographic characteristics may also matter. Education is generally associated with greater skepticism about media (Tsfati and Ariely 2014) and more sophisticated information processing. Research on autocracies, similarly, suggests that more educated citizens are more capable of observing censorship and bias in the media (Guriev and Treisman 2020). More educated citizens should thus be more likely to detect falsehoods.

Finally, some studies show that older citizens are more prone to misinformation (Guess, Nagler, and Tucker 2019). At the same time, older citizens in autocracies may have more experience discerning propaganda. As with exposure to state propaganda outlets, my study aims to distinguish between these alternative possibilities. I should note that this analysis does not aim to establish causal relationships. Rather, it is intended as an important first step in evaluating vulnerability to misinformation in authoritarian regimes. Future work may investigate the causal impact of particular variables of interest—for example, whether one's reliance on state-run news sources causes vulnerability to false propaganda stories, or the latter, instead, causes the former.

## 2 Research Design and Data

This study is situated in Russia, an authoritarian regime that has for decades relied on information manipulation to survive and maintain popular support (Guriev and Treisman 2019). Under Vladimir Putin, the Russian government has been spreading propaganda and disinformation via a vast network of television stations and other news outlets (Lipman, Kachkaeva, and Poyker 2018). At the same time, most Russians use the internet, and, at least before the government's crackdown on alternative news sources in 2022, they could easily access various independent media outlets that provided more objective and balanced reporting (Simonov and Rao 2022). News organizations such *TV Rain* or *The Insider* debunked the Kremlin's disinformation on a regular basis.

To examine how Russians evaluate truths and falsehoods, I conducted four surveys in 2019 and 2020, which are referred to as two "main" surveys (Study 1 and Study 2) and two "supplementary" surveys (Study 3 and Study 4), as detailed in Table 1. Respondents for the main surveys were recruited via social media, and the supplementary surveys were fielded via polling companies Levada Center and OMI. This section describes the design of the two main surveys, and the supplementary surveys are discussed in the online appendix.

The design of Studies 1 and 2 builds on the growing research that investigates vulnerability to falsehoods by exposing citizens to a variety of real-life news messages (see e.g., Pennycook and Rand 2019a, 2019b) and eliciting beliefs about their truthfulness. Participants viewed a series of short true and false news messages, displayed in random order, and for each message, they indicated whether they believed it to be true.<sup>3</sup>

Studies 1 and 2 were promoted as "quizzes" that offered participants to test how well they could detect fake news. At the end of these surveys, respondents learned how many correct answers they had given. Such gamification has been shown to incentivize effort and honest responses in other contexts (Chevalier, Dolton, and Lührmann 2017; Groening and Binnewies 2019). Presenting the studies in this way also allowed me to place news evaluations in a setting similar to casual news consumption, blending in with other content respondents may encounter online.<sup>4</sup> Moreover, this format provided motivation to evaluate a large number of news stories. My study is the first to use such a survey instrument to learn about citizens' evaluations of news stories. The surveys were implemented as stand-alone web applications; see an example of a story vignette in Figure A1 in the appendix.

In each of Studies 1 and 2, respondents were offered to evaluate two "quizzes"—distinct sets of sixteen stories. After completing the first quiz, the respondents were offered to do the second one (most took only the first quiz).

Note that most respondents saw news stories together with the names and the logos of state-run or independent news outlets. These randomly assigned treatments were designed to elicit respondents' perceptions of media credibility, which are examined in a separate paper. A portion of respondents saw news stories without any sources. As various robustness checks discussed below and shown in the appendix, source labels did not affect the results with respect to false news recognition.

<sup>&</sup>lt;sup>3</sup>This study uses a dichotomized (true/false) measure of perceived news veracity because its premise, discussed below, implied that there would be true and false messages, and the stories were selected in such a way that their central claim was clearly true or false. This measurement approach was employed in several recent studies of vulnerability to misinformation (see e.g., Bago, Rand, and Pennycook 2020; Pennycook, Epstein, et al. 2021), and it makes comparisons with other work straightforward. Moreover, as Pennycook and Rand (2019b) show, dichotomized measures produce results similar to more fine-grained scales.

<sup>&</sup>lt;sup>4</sup>See, e.g., a recurring BuzzFeed quiz on fake news: https://www.buzzfeed.com/tag/fake-news-quiz.

### 2.1 Selection of News Stories

I collected a set of news headlines from various Russian and foreign media in the months preceding the surveys. Headlines were slightly extended and in some cases edited for clarity. Several false or satirical news statements published by Russian and foreign media were also added. Fact-checking websites were used to determine the truthfulness of messages; in almost all cases, the selected false stories were clearly designated as false by fact-checkers. Additional fact-checking was performed using reputable news agencies, and stories were included only if their veracity could be clearly determined.<sup>5</sup>

Following the suggestions by Pennycook, Binnendyk, et al. (2021) on improving ecological validity, I included a diverse set of true and false messages, making sure that the participants would not perceive the stories as obviously true or false. Study 2 (the main 2020 survey) included more balanced content selection along key dimensions, including the political direction of stories and their actual veracity; it also more extensively relied on stories that citizens could routinely encounter online, borrowing from top daily news lists by news aggregators shortly before the survey. To further improve ecological validity, Study 2 included a random selection of stories from Russia's largest news aggregator, *Yandex News*, used daily by millions of people. This sampling approximates the news content to which Russian internet users were likely to be exposed at the time of the survey. In the first quiz of Study 2, each respondent evaluated two "recent" stories from Yandex and fourteen "pre-selected" messages, which were the same for all participants. The two "recent" stories were regularly replaced during the study, which was fielded over multiple weeks.<sup>6</sup>

Given these differences, the story selection in Study 1 (the main 2019 survey) may be more challenging, and the results of Study 2 should be more generalizable. Still, considering Study 1 helps to check whether discernment patterns and individual differences in

<sup>&</sup>lt;sup>5</sup>In addition, I have conducted a robustness check of the baseline results, dropping stories that may have been seen as potentially more ambiguous (see Table A12 for details); the results are similar.

<sup>&</sup>lt;sup>6</sup>For details on the selection procedure, see the appendix.

discernment are similar across different selections of messages.

Study 1 included 32 stories, and Study 2 included 50 messages (8 stories were included in both surveys). Some messages were *propaganda-consistent* stories—positive stories about Russia and its government or stories about problems in other countries, a common theme for Russian state propaganda. *Propaganda-inconsistent* messages were negative stories about Russia or positive stories about Western countries or Ukraine. I also added several politically neutral and non-political stories. For the list of stories, see Tables A3 and A4 in the appendix.

## 2.2 Measuring the Variables of Interest

To capture media use, I asked the following question: "Which sources do you typically use to learn the news? Please indicate all that you have used in the last month." Respondents could choose from a long list of major Russian news outlets, including state-run and independent media, and they could specify additional sources (the full list with the categorization of state-run and independent media is in the online appendix). Media use is generally stable (Hasebrink and Popp 2006), and outlets used regularly are more likely to be recalled when answering such questions.

Based on this question, I created two variables. The first is a categorical variable that captures one's general tendency to consume news from state media or alternative sources. It takes the following values: using only or mostly state-run media (including online state-run outlets and state television); using only or mostly independent (critical) media; using both state and independent media; using neither state nor independent media. The last group includes respondents who learned the news from social media or news aggregators and respondents who did not indicate any particular news sources. The second variable is the number of sources each respondent indicated using.

Pro-regime dispositions were measured by the following question: "Do you approve

of the performance of the president of Russia?" (this question was not asked in Study 1; some respondents in Study 2 were also not asked about presidential approval). Response options included: certainly approve, somewhat approve, somewhat disapprove, certainly disapprove. This wording has been commonly used in Russian polling to establish support for President Putin. A recent study has found that surveys asking such questions produced adequate estimates of presidential approval (Frye et al. 2017). The risk of exaggerating support in an anonymous online survey is even lower (Huang and Yeh 2017).

Questions about media use and Putin approval were asked before news discernment tasks to avoid reverse causality. Respondents also reported their age, gender, and whether they had a college degree.

## 2.3 The Sample

Respondents for Studies 1 and 2 were recruited via social media ads on Facebook, using Facebook's ad placement algorithms.<sup>7</sup> While social media users in Russia, as in other countries, are more tech-savvy, more urban, and often more liberal (Reuter and Szakonyi 2015), they increasingly resemble the population at large. In 2020, about 80% of Russians regularly used the internet<sup>8</sup>, and in June 2020, 40 million people in Russia accessed Facebook at least once. Moreover, this audience is of primary interest to scholars of misinformation, as internet users consume news more frequently and often encounter false news.

I followed the suggestions from Zhang et al. (2020) on using Facebook's ad targeting features to ensure that all major demographic subgroups were well represented in the sample. As the Facebook sample may be more liberal, somewhat older, and somewhat more well-off,<sup>9</sup> in Study 1, in addition to Facebook, about 3,000 respondents were recruited

<sup>&</sup>lt;sup>7</sup>There was no monetary compensation for participation in Studies 1 and 2; as noted above, the respondents completed the surveys to find out how well they would recognize falsehoods.

<sup>&</sup>lt;sup>8</sup>https://mediascope.net/news/1250827/.

<sup>&</sup>lt;sup>9</sup>https://ppc.world/articles/auditoriya-shesti-krupneyshih-socsetey-v-rossii-v-2020-godu-izuchaem-insayty/.

from VK, Russia's most popular social media platform, the monthly audience of which was twice as large as the audience of Facebook and more similar to the population at large in terms of demographic and political characteristics (Reuter and Szakonyi 2015).

I removed the responses from those participants who labeled all stories uniformly (all true or all false), as well as unrealistically fast responses (that took less than one second). As a result, Study 1 includes 37,385 respondents who made 632,717 decisions on 32 messages, and Study 2 includes 22,556 respondents and 385,468 decisions on 50 news messages.

Several news evaluation tasks from Studies 1 and 2 were also included in supplementary Studies 3 and 4—more representative surveys fielded via the polling companies OMI and Levada Center. These supplementary surveys, as noted in Table 1, were completed by 2108 and 1608 respondents, respectively. The results, as shown below, were mostly similar across these samples.

In order to implement demographic weights, which facilitate comparisons across surveys (see the next subsection), most models also omit observations with missing data on gender, age, and education; as I discuss below and report in the appendix, dropping these observations does not meaningfully change the estimates. Some respondents in Study 2 also did not answer the question about presidential approval, and the analyses with this covariate use smaller samples. See the regression tables and the summary statistics in Table A1 for details.

### 2.4 Estimation

I examine the accuracy of news evaluations by regressing the dichotomous variable, story rating (1 if a story was labeled as true, and 0 otherwise), on covariates of interest:

$$R_{is} = \alpha + \beta V_i + \psi X_{is} + \epsilon_{is},$$

where i indexes respondents, s indexes news stories, R is story rating, V is the variable of

interest (e.g., a measure of media consumption), *X* is a vector of controls that, depending on a specification, may include age, gender, higher education, the date of the survey, and story features such as whether it was true or false, its political direction, and order in the survey. Where possible, I use story fixed effects instead of story features. In certain models, I also include interactions between respondent-level characteristics (presidential approval or media usage) and the features of news stories. Heteroskedasticity-robust standard errors are clustered on the respondent level. In Studies 1 and 2, the sample size varied between stories: fewer respondents took the second quiz in these surveys, and "recent" stories in Study 2 were included on a rotating basis. For this reason, I weight each observation inversely proportional to the number of respondents who saw the respective story, so that estimates are balanced across stories. In addition, most models apply demographic weights based on gender, age, and education, which were derived from a nationally representative sample, in order to make the samples in different surveys more comparable.

Models in the main text do not control for news sources that were assigned to stories in the experiment (see above), as that would have required me to drop several messages that were not a part of the experiment. However, the results are also very similar in the subsample where stories were shown without sources, and the estimates are virtually unchanged when the models control for randomly assigned sources (Tables A11, A15, and Columns 6–7 in Table A21 in the appendix).

In addition, when examining individual factors of accuracy and discernment, I run analogous regressions on the respondent level with individual measures of discernment as dependent variables. These measures are calculated as differences between each respondent's average rating for true stories and their average rating for true stories (additive measure) or as respondent-level ratios of the average rating for true stories to the average rating for true stories (multiplicative measure), following Guay et al. (2022).

# 3 Findings: How Do Russians Discern False News?

## 3.1 The Overall Accuracy and Discernment

I start with the analysis of the large-scale Studies 1 and 2. Figure 1 reports the percent of respondents who rated stories as true, separately for false and true stories in each of the quizzes within Study 1 and Study 2. The estimates are obtained by regressing story evaluations on the interaction between the quiz dummy and the dummy indicating false stories. The results shown here and elsewhere in the main text are from models with demographic weights, as discussed above. The estimates, however, are very similar in models without weights and when adding observations with missing gender, age, and education; see the regression models in Table A9 in the appendix. Dashed lines indicate the average accuracy—the probability of correctly identifying stories as either true or false—in the respective quiz (see the regressions in Table A10).

### FIGURE 1 ABOUT HERE

Mostly, the respondents could discern between true and false stories (the larger the difference in ratings between true and false stories, the better the discernment). With the exception of quiz 1 in Study 1, only 30–40 percent found false messages to be true.<sup>10</sup> The average belief in true messages was 48–55 percent. The average rating for "recent" stories from Yandex was slightly higher, about 57 percent (Column 4 in Table A9).

When comparing Studies 1 and 2, respondents performed substantially better in Study 2, where the average rating was 33 percent for false stories and 53 percent for true stories. The overall accuracy was also higher in Study 2 (57 percent) than in Study 1 (50 percent). As discussed above, Study 1 may have included more challenging stories.

These results are broadly similar to the outcomes of studies of fake news in other

<sup>&</sup>lt;sup>10</sup>The unusually high belief in false stories in quiz 1 in Study 1 may follow from a less balanced story selection: that quiz included only five false stories, two of which many respondents viewed as plausible.

political contexts. For example, in a U.S. study by Guess et al. (2020), the average rating was just under 60 percent for true stories and just above 30 percent for false stories—very close to the results from Study 2, especially considering the discernment between true "recent" stories and false stories (57 percent and 33 percent in Study 2, respectively). In a study of COVID misinformation in 16 countries by Arechar et al. (2022), the average rating was, again, almost 60 percent for true stories and just above 30 percent for false stories. The less accurate results in Study 1 are also not very unusual (especially as it was probably more challenging). Arechar et al. (2022) and Guess et al. (2020) find similarly lower discernment—about 10 percent difference between true and false stories—in countries such as China and India.

There is also variability in existing work. For example, in the U.S. studies by Pennycook and Rand (2019b) and Lyons et al. (2021), the average ratings were 63–67 percent for true stories and almost 50 percent for false stories. In these cases, the overall belief was higher, but discernment was lower than in my Study 2.

Overall, therefore, Russian respondents performed largely within the parameters established by misinformation research in other contexts. Russians were not substantially more discerning, as some research on autocracies might suggest, but also not much less discerning, compared to other countries. Russians, however, may be somewhat more skeptical, however, given their lower ratings for true stories.

Further, I compared the results in Studies 1 and 2 to the results of two supplementary surveys: a nationally representative in-person survey via the polling firm Levada Center (Study 3) and an online survey via the polling firm OMI (Study 4). In these supplementary surveys, the respondents evaluated a subset of messages from Studies 1 and 2 (see above and in the appendix). Table 2 shows the truthfulness rating for specific stories in the main surveys and in the supplementary OMI or Levada surveys. The last column shows the difference in the percent of correct responses between the main and supplementary

surveys (a larger number means the respondents in the main surveys were more accurate).

### TABLE 2 ABOUT HERE

In most cases, the differences between the main and supplementary surveys were fairly small (a few percentage points). There were only two large discrepancies. In Study 3 (Levada), respondents were much more likely to believe the false story about a failure of a U.S. submarine (story 3), compared to Study 1, partly because the nationally representative sample in Study 3 included a larger share of pro-Putin citizens who were more likely to believe this propaganda story (Table A7; also see below the discussion of political biases). In Study 4 (OMI), respondents were much less likely to believe a true story about mafia bosses let out of prison (story 19), compared to Study 2, although this was not driven by political disagreements (see Table A8). The divergence may be driven by differences in news exposure in different samples or by a somewhat different presentation of stories across surveys (as shown in the appendix, stories were longer in the OMI and Levada surveys).

Importantly, in most cases, the Levada and OMI respondents gave less accurate answers, which means that Studies 1 and 2 may somewhat overestimate the quality of news discernment in the Russian population. This "upward bias" may stem from a more sophisticated sample or from the quiz design.

As for the sample, Study 1 included respondents recruited from VK, a Russian social media platform. VK users, who should be more similar to the broader population, were indeed less discerning: their average rating for true stories was 2 percentage points lower, and they were 5 percentage points more likely to label false stories as true in the second quiz (Column 8 in Table A9).

As for the differences possibly induced by the quiz design, the format of Studies 1 and 2 may have incentivized accuracy, but the evaluations of selected stories were mostly not dramatically different between the main and supplementary surveys. One might also suggest that the quiz design "primed" respondents to look for falsehoods and thus be more skeptical. However, respondents in the OMI survey were *less* likely to believe all three true stories (Table 2), so it is unlikely that there was more skepticism in Studies 1 and 2.

Overall, accuracy and discernment may be somewhat worse in the general Russian population, but additional investigation is needed to confirm this intuition.

### 3.2 State Media Consumers Are Less Accurate and Discerning

Next, I consider whether the accuracy and discernment depend on media consumption and other individual-level factors, starting, again, with Studies 1 and 2. Figure 2 compares the performance of different groups of media consumers. The plotted estimates are coefficients from regressions of story ratings (whether stories are labeled as true) on media usage categories, relative to the reference category—respondents who reported using neither propaganda outlets nor independent media. This group was chosen as the baseline category because it was the most neutral; most respondents in this group either did not follow any particular news sources or relied on news aggregators. Following Guess et al. (2020) and other studies, the regression models are fitted separately to false and true stories, controlling for respondent features and story fixed effects, as reported in Table A13 (results are very similar without demographic weights; see Table A14). The upper panel reports the results for all stories, and the lower panel focuses on politically neutral stories.

### FIGURE 2 ABOUT HERE

The larger the distance between the coefficients for true and false stories in each row, the better the respective subgroup distinguishes between truths and falsehoods. Consumers of critical media were more discerning: they consistently rated true stories as true more often than consumers of state media, and they also were less likely to rate false stories as true. That is, consumers of state media did worse with respect to both true and false stories. I obtain similar results when I interact media usage with the false story dummy (without story fixed effects). The estimates of discernment between true and false stories from these models are reported in the appendix Figure A2 and Table A16. The resulting difference in accuracy and discernment between consumers of state media and consumers of critical media was quite sizable—about 18 percentage points in Study 1 and about 14 percentage points in Study 2. Regressing individual-level measures of discernment on media usage also shows that consumers of state media were less discerning than consumers of critical media; see Table A16.

However, the differences between consumers of state and independent media were smaller with respect to neutral stories (lower panel). Evaluations of neutral stories may more accurately reflect citizens' baseline discernment capacity. Then, exposure to propaganda may not dramatically undermine one's general capacity to assess news information.

Importantly, citizens who consumed ideologically diverse media—both state and critical news outlets—were not especially accurate in their evaluations. This subgroup was more successful than consumers of propaganda but less successful than those who consumed only critical media. Therefore, diversifying media consumption may be helpful to users of state media but harmful to those who only consume independent reporting.

In the supplementary OMI survey (Study 4), the pattern was generally similar, with some numerical differences (Table A17 reports an analysis of Studies 2 and 4 limited to the four stories that were included in Study 4).

Further, it mattered little whether respondents knew and used many different news sources. As Table A18 shows, those who indicated using 5 or more different news sources were several percentage points more discerning in Study 2: they were more likely to rate true stories as true and less likely to rate false stories as false, compared to those who relied on fewer news organizations. However, in Study 1, such respondents were more likely to believe both true and false stories, so they were not more discerning.

There were only minor differences in accuracy depending on other individual-level

factors. Figure A3 and Table A13 in the appendix show that most age cohorts performed similarly. Older respondents were a few percentage points more likely to judge true news stories as false, but there was no consistent difference in discernment by age.

As for education, my results are consistent with the conventional expectation that more educated citizens process news more carefully (Table A13). However, the difference between respondents with and without a college degree was very small. More educated respondents rated false stories as true as often as less educated ones, but they were about 1–2 percentage points more likely to correctly recognize true stories.

In terms of individual-level discernment (Table A19), and when comparing Study 2 to Study 4 (Table A20), the results were similar. In several cases, older respondents were slightly less discerning, but largely, there was no systematic difference between age groups. More educated respondents, as before, were somewhat more discerning.

### 3.3 Discernment of Congruent and Incongruent Messages

Above, I have suggested that evaluating political content accurately may be especially difficult because individuals treat like-minded information favorably and discount incongruent information. To consider how political biases may shape the quality of news evaluations, I compared how often Putin supporters and critics rated true and false stories as true depending on *story direction*: whether messages were politically congruent, incongruent, or neutral. For Putin supporters, pro-regime stories are congruent, and critical (propaganda-inconsistent) stories are incongruent, and vice versa for Putin critics.

Figure 3 plots average story ratings by story type and individual-level Putin support. The results reported here and below are from Study 2, as presidential approval was not measured in Study 1. The estimates are calculated from a regression of story ratings on the interaction between presidential approval, "fake" dummy, and the political direction of stories (Column 1 in Table A21).<sup>11</sup> Dashed lines on each subplot indicate the average accuracy (share of correct responses) for the respective subgroup, calculated from the regression in Column 8 in Table A21.

#### FIGURE 3 ABOUT HERE

Putin supporters and critics performed similarly when evaluating politically neutral stories. Supporters gave somewhat less accurate guesses with respect to both false and true stories, so their overall discernment rate was lower, but not dramatically—it was about 19 percentage points, compared to about 24 points among critics. Therefore, these two groups probably have comparable baseline discernment capacity.

Moreover, discernment—the difference in average ratings between true and false stories—was substantial, between 17–28 percentage points. That is, both supporters and critics could often distinguish between true and false stories even when it came to political content. Appendix Figure A4 shows that these discernment rates were similar for supporters and critics in each category of stories; the difference with respect to neutral stories was somewhat larger, but not statistically significant at the 95% level.<sup>12</sup>

However, there were differences in how Putin supporters and opposition-minded respondents evaluated political stories. While both groups were more vulnerable to likeminded falsehoods than to politically incongruent false stories, this vulnerability was less evident for regime critics. Among the critics, the average rating was about 33 percent for congruent (propaganda-inconsistent) falsehoods and about 30 percent for incongruent (propaganda-consistent) falsehoods—a difference of just 3 percentage points. Moreover, critics performed similarly regardless of story direction: they rated false stories as true 30–33 percent of the time, and they rated true stories as true 54–58 percent of the time.

Supporters, however, believed all congruent (pro-regime) stories more often and all

<sup>&</sup>lt;sup>11</sup>The estimates are very similar when adjusting for covariates, omitting demographic weights, and controlling for randomly assigned news sources. See Table A21.

<sup>&</sup>lt;sup>12</sup>Discernment rates are calculated as contrasts from the same regression model.

incongruent (critical) stories less often. They rated congruent true stories as true 67 percent of the time but incongruent true stories only 37 percent of the time; at the same time, they rated congruent false stories as true 41 percent of the time and incongruent false stories just 20 percent of the time. Supporters' skepticism about critical stories brought down their overall accuracy with respect to these stories to less than 50 percent.

Putin critics, at the same time, still exhibited a bias against incongruent information (they were 9 percentage points less likely to believe true pro-regime stories, compared to supporters) and in favor of congruent messages (they were 13 percentage points more vulnerable to false critical stories than supporters).

These patterns are consistent with the idea that citizens often judge news information based on whether it fits with their general political beliefs.<sup>13</sup> As shown above, supporters and critics exhibited similar baseline capacity to discern news information (see the results for neutral stories), but political biases shifted their overall belief in congruent or incongruent stories from that baseline.

However, citizens may also evaluate news content on the basis of its familiarity. Putin supporters mostly learn news from state media (see Table A2), so they may view pro-regime messages as plausible because these or similar messages are often repeated by state-run outlets. Consequently, supporters may be more skeptical about critical messages because of minimal exposure to independent media. Putin critics, in turn, may view pro-regime messages more skeptically and critical messages less skeptically because they are less exposed to propaganda through state media and more exposed to independent reporting.

To explore this possibility, I split supporters and critics into subgroups by whether they primarily got their news from like-minded media (state media for supporters and independent media for critics) or were (also) exposed to politically incongruent media. Then, I regress story ratings on the interaction between these subgroup dummies, the

<sup>&</sup>lt;sup>13</sup>As Table A4 in the appendix shows, Putin supporters were less likely to believe all critical messages, both true and false, whereas Putin critics were less likely to believe all pro-regime messages.

"fake" dummy, and story direction. For results, see Figure 4 and Table A22. To simplify discussion, the estimates are labeled and discussed by story direction; estimates are in green for congruent stories and in orange for incongruent stories.

#### FIGURE 4 ABOUT HERE

Pro-Putin respondents evaluated pro-regime (congruent) stories fairly similarly regardless of the media they used (two rightmost plots in the middle panel). Opposition-minded respondents, in contrast, were 8–10 percentage points more likely to believe both true and false pro-regime stories if they used state media. Similarly, supporters who used critical media were somewhat more likely to believe true critical stories (two rightmost plots in the lower panel), but critics who consumed state media were 20 and 10 percentage points less likely to believe true and false critical messages (two leftmost plots in the lower panel).

This analysis suggests one possible explanation for the asymmetry in Figure 3 whereby critics were not strongly biased in favor of critical stories or against pro-regime stories. In contrast to supporters, only a minority of critics use only congruent (independent) media, and almost half consume state media (Table A2). Thus, opposition-minded Russians are much more exposed to incongruent state media. If such exposure makes critics more receptive to pro-regime narratives, it could partly "offset" the bias that would stem from pro-opposition views. Figure 4 shows that critics who rely on critical media exhibit more bias in favor of critical messages and against propaganda stories. Therefore, critics may have been less neutral in their judgments if they consumed more independent media.

At the same time, even if media exposure shapes the perceptions of news veracity, it cannot explain all of the difference between supporters and critics. Opposition-minded respondents who used state media still believed pro-regime stories less and critical stories more, compared to supporters. Similarly, supporters who used critical media were more likely to rate pro-regime stories as true, and they were dramatically less likely to rate critical stories as true, compared to opposition-minded citizens. Such a strong bias against

incongruent information may indicate that regime supporters are stronger "partisans" than critics, but that requires additional investigation.

To summarize, discernment of true and false political stories may be affected both by political "heuristics" and the familiarity of certain narratives that could emerge through media exposure. This study does not posit a particular causal explanation: media usage may to some extent proxy for stronger political beliefs, which would produce starker disagreements about news veracity, or there may be another factor such as cultural conservatism that determines both the consumption of state media and the strength of pro-regime dispositions. My analysis controls for important individual and story-level factors, but it cannot completely rule out such possibilities, and they warrant further inquiry.

Regardless of the explanation for the perceptual biases documented in this study, such biases may "help" to reject false news and correctly recognize true messages, but in other cases, they prompt citizens to reject true information and accept falsehoods. In autocracies, the pro-regime bias that exists among government supporters and consumers of state media may increase their vulnerability to propaganda and resistance to critical reporting, whereas opposition-minded citizens and consumers of independent media may be better off. However, it is worth reiterating that when citizens perform better or worse with respect to political messages, that does not necessarily imply that they are more or less discerning; more likely, they only happen to be more or less correct because the answer is more or less aligned with their political dispositions and media exposure.

# 4 Discussion and Conclusion

This paper has examined how citizens distinguish between true and false stories in an autocracy where the information environment is dominated by state propaganda. In general, Russians were more or less capable of discerning between true and false messages, especially when messages were more familiar, and their performance was comparable to discernment capacity found in some studies in Western democracies. However, my study also suggests that Russians may be somewhat more skeptical about news information. In addition, accuracy and discernment might be lower in the general Russian population, although more research is needed to verify this possibility.

Further, similar to citizens elsewhere (Ditto et al. 2018), Russians appear to judge news information based on its compatibility with their beliefs and understanding of the world. Such political biases may be a key reason why citizens of autocracies fall victim to authoritarian propaganda. The baseline capacity to discern falsehoods does not differ much between regime supporters and critics, regardless of whether they use politically congruent or incongruent media (Figure 4). But regime supporters are more vulnerable to propaganda falsehoods, compared to opposition-minded citizens (who thus possess an advantage against state propaganda efforts). Thus, my analysis provides important insights into news processing in authoritarian regimes and citizens' ability to resist propaganda.

My study also highlights that the reporting of independent media is often not a threat to authoritarian leaders. In both Studies 1 and 2, true critical stories were rated as false about half of the time. Even opposition-minded consumers of independent media, whom we might expect to be biased in favor of critical messages, recognized such stories correctly only 69 percent of the time (Figure 4). Critical stories may be too rare in an authoritarian media environment, and they may appear less plausible against the background of propaganda narratives that are continually repeated by state media. This indicates a problem for independent news organizations: Despite their efforts to promote the truth, too many citizens, even those who dislike the government, are skeptical about that truth.

At the same time, opposition-minded citizens in my study were also susceptible to false critical stories. The latter tendency may foster the spread of anti-regime rumors that could threaten authoritarian stability (Huang 2015).

The results of my analysis with respect to political biases and susceptibility to propaganda may apply across different autocratic regimes and regime subtypes, although the role of political biases may be more pronounced or muted depending on how polarized these societies are. My findings about lower discernment capacity among consumers of state media also may suggest that we should see more discernment in countries with higher media freedom and more established independent media and less discernment in closed regimes with limited access to outside information. Overall, my results may be more directly applicable to electoral autocracies such as Turkey, Venezuela, or Hungary, which, as Russia, exhibit some limited political and media competition and some polarization.

One possible direction for future research is to examine a broader set of individual and story-level factors that affect the discernment of misinformation in authoritarian contexts—in particular, the differences in cognitive style or effort (Pennycook and Rand 2019b). It is also important to understand how we can counter propaganda falsehoods in autocracies. Recent attempts to teach citizens in democracies to recognize misinformation have produced inconsistent results (Guess et al. 2020; Badrinathan 2021). We should study the effects of such interventions in autocracies, as well as the strategies and tactics that citizens of these countries themselves develop to discern falsehoods.

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# Tables

	Main s	surveys	Supplementary surveys		
	Study 1	Study 2	Study 3	Study 4	
Sample	Social media users (Facebook, VK)	Social media users (Facebook)	Nationally representative	Online panel	
Polling firm	_	_	Levada Center	OMI	
Mode	Online	Online	In-person	Online	
Dates	August 2019	May–June 2020	August 2019	June 2020	
N	37,385	22,556	1608	2108	

### Table 1: The four studies

*Note:* In supplementary Studies 3 and 4, respondents evaluated a subset of news stories included in the main Studies 1 and 2. For further details, see the online appendix.

				Main studies		Supplementary studies		
Year	Story code	Veracity	Study 1	Study 2	Study 3 (Levada)	Study 4 (OMI)	Accuracy difference	
2019	3	FALSE	31.7		56.1		24.4	
2019	9	TRUE	28.1		34.8		-6.6	
2019	13	TRUE	79.7		80.7		-1	
2020	7	TRUE		49.1		47.7	1.4	
2020	10	FALSE		45.8		50.8	5	
2020	11	TRUE		55.4		47.8	7.6	
2020	19	TRUE		35.8		23.7	12.2	

### Table 2: Percent of respondents who rated stories as true

*Note:* The percent of respondents in the main and supplementary surveys that rated news stories as true. Estimates are weighted means with demographic weights derived from the Levada survey (Study 3). Accuracy difference is the difference in the percent of correct responses between Study 1 (main 2019 survey) and Study 3 (Levada survey), or Study 2 (main 2020 survey) and Study 4 (OMI survey), respectively. A positive difference means the respondents in the main surveys were more accurate, and vice versa. For story texts and study descriptions, see the appendix.

# **Figures**



Discernment of true and false stories in Studies 1 and 2

Figure 1: The percent of respondents rating news stories as true in each quiz in Studies 1 and 2, by story category. The means and 95% confidence intervals are calculated from linear regressions. Dashed lines indicate overall accuracy, or the proportion of correct responses, in each quiz.



Discernment depending on media usage, Studies 1 and 2

Figure 2: Coefficients and 95% confidence intervals from linear regressions of story ratings on media usage categories and covariates. Story fixed effects included. Coefficients are relative to the reference category: those who use neither state-run nor independent media. In both Study 1 and 2, the estimates are based on pooled data from two quizzes.



Discernment, by regime support and congruence, Study 2

Figure 3: The percent of respondents rating news stories as true, depending on regime support and political congruence. The means and 95% confidence intervals are calculated from a linear regression of story ratings on regime support, political direction of stories, and the false story dummy. Dashed lines indicate the proportion of correct responses in each subgroup. Data from Study 2 (pooled data across two quizzes).



Discernment, by regime support, media usage, and congruence, Study 2

Figure 4: The percent of respondents rating news stories as true, depending on regime support, media usage, and political congruence. The means and 95% confidence intervals are calculated from a linear regression of story ratings on subgroup dummies for Putin supporters and critics who use like-minded or other media, political direction of stories, and the false story dummy. Dashed lines indicate the proportion of correct responses in each subgroup. Data from Study 2 (pooled data across two quizzes).

# Data Availability Statement

The data that support the findings of this study are available from the corresponding author, A.S., upon reasonable request.

# Appendix

## A Note on Human Subjects Research

This study was determined to be exempt by the Institutional Review Board at the University of Wisconsin-Madison (IRB protocols ID 2019-0763, 2019-0800, and 2020-0639), as defined under 45 CFR 46 (Category 2). For questions, you may contact the Education and Social/Behavioral Science IRB at 608-263-2320. The study is in compliance with APSA's Principles and Guidance for Human Subjects Research. In particular, the participants were Russian adults who engaged with the study using their native language; the participants provided their informed consent to participate in the study; the study did not collect any identifying data on the participants; their responses are kept confidential and are analyzed only in an aggregated form. The subjects were able to contact the researcher in case they had any questions.

## **Descriptive Statistics**

	Main studies						Supplementary studies			
		1			2		3		4	
	Fac	ebook		VK	Facebook		Levada		OMI	
Variable	%	Non- missing	%	Non- missing	%	Non- missing	%	Non- missing	%	Non-missing
Approve of president	NA	NA	NA	NA	40.9	15533	67.8	1567	76.3	1760
Media: Neither state nor critical	26.4	33146	35.0	2860	20.5	19017	NA	NA	15.7	2108
Media: Only/mostly critical	16.1	33146	7.5	2860	18.1	19017	NA	NA	3.4	2108
Media: Only/mostly state-run	21.4	33146	21.1	2860	22.4	19017	NA	NA	37.7	2108
Media: State and critical	18.5	33146	10.7	2860	21.5	19017	NA	NA	10.3	2108
Media: State TV	17.6	33146	25.7	2860	17.6	19017	NA	NA	32.8	2108
Age 18-24	7.1	31811	34.1	2646	5.4	17783	9.2	1608	10.9	2108
Age 25-34	24.1	31811	22.6	2646	19.4	17783	19.2	1608	25.8	2108
Age 35-44	23.8	31811	15.2	2646	23.6	17783	22.3	1608	30.8	2108
Age 45-54	23.7	31811	14.4	2646	22.3	17783	13.6	1608	14.8	2108
Age 55-64	15.7	31811	10.8	2646	20.6	17783	21.1	1608	14.2	2108
Age 65+	5.7	31811	3.0	2646	8.7	17783	14.7	1608	3.6	2108
Female	66.2	31655	55.8	2631	58.6	17452	55.2	1608	50.1	2108
Higher education	86.0	31491	63.4	2593	81.3	17411	29.5	1608	58.4	2108

Table A1: Summary statistics for Studies 1-4

*Note:* The percent of respondents in each category. Calculation of means in Studies 1–3 is limited to respondents with nonmissing data on media usage. For Study 1, the means are reported separately for respondents recruited from Facebook and VK.

Media usage	Critics, %	Supporters, %
Neither state nor critical	21.5	18.5
Only/mostly critical	29.8	3.9
Only/mostly state-run	23.5	58.7
State and critical	25.1	18.8

*Note:* The percent of Putin supporters and critics in Study 2 (main 2020 survey) that use state media, critical media, both types of media, or neither.

## **News Vignette (Example)**

[*DISCLAIMER ABOVE THE VIGNETTE:*] Some of these news statements are true and some are not. Try to determine which are true and which are false. You don't have to know the facts: just use your best judgment. To answer each question, choose TRUE or NOT TRUE.



Figure A1: This is an example of an experimental vignette with a news story attributed to a state-controlled news outlet, Russia-24. The buttons under the vignette read: TRUE; UNTRUE; not selected (the initial setting).

# The Categorization of State-Controlled and Critical Media Outlets

This list of news outlets was compiled based on several internet rankings of most popular websites in Russia (*Yandex.Radar, Liveinternet, Rambler Top 100, Mediametrics*), and some less popular, but important independent news outlets such as *BBC* were added. The categorization into state-controlled (propagandistic) and independent (critical) news outlets is based on media ownership, on news reports on the Russian media industry, and on previous scholarship that has examined or categorized Russian media (Simonov and Rao 2022; Greene and Robertson 2019).

**State-controlled media outlets**: *Channel One, Russia-24, Russia-1, Vesti, RT, RIA, TASS, Zvezda, Sputnik, Rossiyskaya Gazeta (RG)* (all of the preceding outlets were owned by the government); *NTV, RenTV, Komsomolskaya Pravda (KP), Moskovskiy Komsomolets, Izvestiya, Lenta.ru, Gazeta.ru, Vzglyad* (these outlets were controlled by pro-Kremlin oligarchs).

**Independent (critical) media outlets**: *Rain, Novaya Gazeta, Vedomosti, Rosbalt* (owned by independent entrepreneurs at the moment of the survey); *Echo of Moscow; BBC, Meduza, Euronews*, and other foreign news sources.

The list of news outlets also included *RBC* and *Kommersant*, business news outlets that were controlled by Kremlin-friendly oligarchs but were not as strongly pro-government as the state-controlled media organizations listed above.

## The Procedure for the Selection of News Stories

News stories listed in Tables A3 and A4 below were selected prior to the start of the study. Most of these news stories were taken from the lists of top news stories by Russian online news aggregators in the months preceding the study. Several news stories were sought and included specifically to ensure, first, that there were some false news stories in the list, and second, that there were news stories to which government supporters would be more sympathetic (in the table, they are listed as "propaganda-consistent"), stories to which government critics would be more sympathetic ("propaganda-inconsistent" stories), and stories that should not trigger political responses ("neutral"). News stories were edited for clarity.

To check the veracity of these stories, I relied on existing fact-checking resources such as *Politifact* and the fact-checks published by the Russian investigative web site *The Insider*. When fact checks were not available, I fact checked the stories based on reports by authoritative independent news agencies, economic reports, and other data. If the veracity of a story could not be established, the story was excluded from selection.

In Study 2, two slots in the quiz were reserved for "recent" stories that were updated regularly based on recent news reports. Since these stories were regularly replaced, the study included in total 20 such "recent" stories, also listed in the table below. The selection procedure, performed two or three times a week, was as follows.

First, I used a web scraping script to download top news stories on politics and international news from *Yandex News*, Russia's largest news aggregator with a daily audience of 9 million people (in 2022, Yandex sold *Yandex News* to another Russian company, VK; after the sale, the service was renamed). The aggregator uses an algorithm to determine the news stories that are popular at any given moment. "Politics" and "world news" are two of the sections on the aggregator's main page, and at any particular moment, there are several dozens of news stories under each of these two labels.

After downloading all the stories in these two categories, I eliminated irrelevant messages based on several criteria: stories that reported future events without indicating their substance (e.g., announcements of press conferences); stories that were currently developing and might have changed quickly (e.g., the number of deaths from COVID-19); stories focused on technical details of events (e.g., the amount of shipments entering a port, low-level bureaucratic appointments); opinions or personal statements, except for statements by key political and business leaders; stories that could not be reliably fact-checked (e.g., information about military operations).

This preliminary selection produced shorter lists of candidate news stories under both "politics" and "world news." After obtaining these lists, I used a random number generator to select one news story from each of the two topics. These two news stories were fact-checked and then added to the survey. Largely, I aimed to preserve the headlines from *Yandex News*, sometimes expanding the text based on the text of the corresponding news story or slightly editing it for clarity.

# **News Stories**

# Table A3: News messages evaluated in Study 1 (main 2019 survey)

Code	Text	False?	Direction	Accuracy, %
1	Because of the sanctions, the European economy has lost 500 billion euros	FALSE	Propaganda-	41.1
2	Trump urged Americans to boycott Chinese goods and "just buy everything at Wal-Mart"	FALSE	Neutral	23.9
3	A U.S. submarine got stuck in the ice while rehearsing "strikes against Russia"	FALSE	Propaganda- consistent	71.4
4	In a survey in the U.S., 57% said they are against teaching Arabic numerals in schools	TRUE	Propaganda- consistent	43.1
5	A Russian has been able to live for 60 years with only one of his brain hemispheres	TRUE	Neutral	46.6
6	Since 2002, Putin's wage has increased 12-fold	TRUE	Propaganda- inconsistent	57.5
7	In the Russian version of the movie Hellboy, Stalin was replaced with Hitler	TRUE	Propaganda- inconsistent	30.1
8	In the Komi province, books published by the Soros Foundation were burnt because of being "alien to the Russian ideology"	TRUE	Propaganda- inconsistent	55.8
9	The Ukrainian economy has been growing faster than the Russian economy for four years now	TRUE	Propaganda- inconsistent	29.4
10	In Orenburg, a retiree died in the circus arena while executing instructions by clowns	TRUE	Neutral	57.1
11	In Tuva, a man was saved from a bear's den, where he had spent a month with a broken spine	FALSE	Neutral	58.8
12	A company in Tatarstan has promised to pay 100 rubles per day to any woman who wears a skirt at work	TRUE	Neutral	61.4
13	The Russian statistical agency has established that 80% of Russian families have difficulties with buying the necessary goods	TRUE	Propaganda- inconsistent	79.4
14	Bill Gates, Microsoft's founder, complained that taxes are too	TRUE	Neutral	33.4
15	A British man pretended to be deaf for 62 years to avoid listening to his "annovingly talkative" wife	FALSE	Neutral	31.8
16	In May, unknown persons stole a bridge in the Murmansk	TRUE	Neutral	51.3
17	In California, the words "husband," "wife," "groom," and "bride" are banned because of same-sex marriages	FALSE	Propaganda- consistent	30.5
18	In Kalmykia, a teacher sealed students' mouths with a sticky tape to "ensure discipline in class"	TRUE	Neutral	79.5
19	In Crimea, Americans attended a demonstration holding a banner saying "No to NATO"	TRUE	Propaganda- consistent	16.5
20	In the U.S., an 11-year-old student was arrested for refusing to pledge allegiance to the flag	FALSE	Propaganda- consistent	74.1
21	Amateur divers have found a World War II German submarine in Lake Ontario	FALSE	Neutral	60.1
22	A biologist from the University of Miami was able to cross the marijuana plant with strawberries	FALSE	Neutral	53.9
23	The president of Ukraine urged bureaucrats to eat shawarma "to be closer to the people"	TRUE	Neutral	60.3
24	Trump signed Bibles for tornado victims	TRUE	Neutral	54.9
25	British human rights activists called on the Russian government to release prisoners from Siberian prisons because of forest fires	FALSE	Neutral	51.3
26	An Irish photographer sold a photo of a potato for a million dollars	TRUE	Neutral	54.6

27	A senator said that the U.S. needs space forces to fight space pirates	TRUE	Neutral	44.0
28	In Astrakhan, bailiffs extracted a debtor out of a grave	TRUE	Neutral	28.0
29	The Central Bank officials said that Russian fairy tales "need to be changed" because they "teach children to be freeloaders"	TRUE	Neutral	60.5
30	Killer whales attacked a whaler on the coast of Japan, 16 seamen are dead	FALSE	Neutral	71.2
31	Pope has given Putin a medal, "Angel, Guardian of Peace," which is awarded by the Vatican once in a hundred years	FALSE	Propaganda- consistent	70.3
32	In Magadan, citizens will be fined for feeding pigeons	TRUE	Neutral	62.8

*Note:* Stories 1-16 included in the first quiz, stories 17-32 included in the second quiz. Accuracy is the percent of respondents who correctly recognized the respective story as true or false. Sample is limited to respondents with non-missing data on gender, age, education, and media usage. See the text for details.

## Table A4: News messages evaluated in Study 2 (main 2020 survey)

					% who said	d story is true
Code	Text	False?	Direction	Accuracy, %	Critics	Supporters
1	A man in Britain pretended to be deaf for 62 years to avoid listening to his "too talkative" wife	FALSE	Neutral	42.2	57.6	58.2
2	Because of sanctions against Russia, the European Union has lost 500 billion euros	FALSE	Propaganda- consistent	50.9	40.2	62.0
3	In the last four years, the Ukrainian economy grew faster than the Russian economy, and it grew twice as fast in the past year	TRUE	Propaganda- inconsistent	25.0	32.7	13.7
4	A man in the Moscow region has lived for 60 years with only one brain hemisphere. Doctors did not find any problems with his motor apparatus or vision	TRUE	Neutral	44.3	45.2	43.0
5	Russian scientists created plants that constantly phosphoresce. The new kind of plant is developed based on the tobacco plant, using fungi genes	TRUE	Neutral	39.3	40.5	37.5
6	A biology student from the University of Miami crossbred strawberries with marijuana, fulfilling his old dream	FALSE	Neutral	63.0	39.5	33.3
7	Trump thanked Putin for the oil deal and said that "he acted like a real gentleman"	TRUE	Propaganda- consistent	52.4	49.0	57.2
8	In New York, trucks with dozens of decomposing bodies were found. The locals called the police after suffering from an unpleasant smell for several days	TRUE	Propaganda- consistent	40.0	37.2	44.1
9	Pope Francis awarded Putin with the medal "Angel, Guardian of Peace." The medal is awarded once in a hundred years, and Putin is its fifth recipient	FALSE	Propaganda- consistent	82.2	14.6	22.4

10	A study by the U.S. National Academy of Sciences has shown that a human was first infected by the new type of coronavirus in America in 2019. The outbreak in China was caused by a mutated version of this virus	FALSE	Propaganda- consistent	57.0	38.1	50.1
11	Russia is again bringing in uranium waste from Germany. In the 2000s, this	TRUE	Propaganda- inconsistent	57.4	66.2	44.6
12	Americans who lost their jobs due to coronavirus do not want to look for new jobs; for many, unemployment benefits are greater than their previous income	TRUE	Neutral	70.5	70.3	70.9
13	In case of war with the U.S., Russia could be destroyed in three hours, Chinese military analysts calculated	FALSE	Propaganda- inconsistent	66.4	39.7	24.7
14	Putin signs a new law that gives him lifetime immunity and the right to be a lifetime senator	TRUE	Propaganda- inconsistent	26.7	34.4	15.4
15	A professor in Sweden has suggested getting rid of "conservative taboos" and considering using human meat as food. He thinks that meat obtained from dead bodies could save humanity from food crises	FALSE	Propaganda- consistent	71.6	26.2	31.4
16	A woman in the U.S. describes how her Soviet upbringing helped her during the pandemic: Her mother from early childhood taught her to wash her hands before eating and after going to the bathroom	TRUE	Propaganda- consistent	83.1	79.9	87.2
17	Russia billed the U.S. 660,000 dollars for medical and protective equipment. Earlier, Russian authorities had said that the cargo is humanitarian aid	TRUE	Propaganda- inconsistent	45.9	57.7	30.5
18	In North Ossetia, locals burn a cell tower to the ground. They were afraid that 5G networks would be used to "x-ray" and "chip" them	TRUE	Neutral	81.4	84.4	77.5
19	In Italy, several mafia bosses were let out of prison because of the pandemic. Among them is one of the most influential leaders of the Sicilian Cosa Nostra Francesco Bonura who was doing his 23-year stint in prison	TRUE	Neutral	38.5	37.9	39.3
20	In Germany, a rating of the most unpleasant tourists was compiled, and Russians are leading. 60% of respondents said that Russian tourists are too noisy, and 50% said that they lack "food etiquette"	TRUE	Propaganda- inconsistent	74.9	77.3	71.7
21	Documents confirming Trump's links to Russia were obtained from the Deutsche Bank	FALSE	Propaganda- inconsistent	78.0	25.1	17.9
22	In California, the words "husband," "wife," "groom," and "bride" are banned because of same-sex marriages	FALSE	Propaganda- consistent	35.2	57.6	74.3

23	Russia adjusts the date of the ending of the Second World War. It will be September 3 now	TRUE	Propaganda- inconsistent	47.5	53.9	39.1
24	The Central Bank burns one ton of banknotes with denominations of 100 and 500 rubles that were infected by the coronavirus	FALSE	Neutral	90.1	9.7	10.3
25	Russian banks moved some employees to work and live in the office. They are promised higher salaries and bonuses	TRUE	Neutral	35.3	36.7	33.4
26	The number of Ukrainians who positively perceive Russia has increased by 50% in three years	TRUE	Propaganda- consistent	43.3	37.3	51.1
27	The State Duma adopts in the first reading a law that will ban giving human names to animals	FALSE	Neutral	88.7	11.6	11.0
28	German zoos want to feed some animals to others because due to a lack of visitors they are out of money	FALSE	Propaganda- consistent	71.5	24.5	33.8
29	Putin awards Kim Jong Un with a medal "75 years of victory in the Great Patriotic War"	TRUE	Propaganda- inconsistent	50.8	57.6	41.8
30	In Tuva, a man was rescued from a bear's den where he spent a month with a broken spine	FALSE	Neutral	50.0	52.0	47.4
31	Zhirinovsky suggests testing the coronavirus vaccine on prisoners	TRUE	Neutral	62.5	65.9	57.9
32	The wealth of the richest Americans has grown by \$434 billion since March, an analysis of the Forbes ranking shows	TRUE	Neutral	65.7	65.6	65.9
33	For the second time, Poroshenko did not arrive for questioning in an investigation about the illegal import of paintings	TRUE	Propaganda- consistent	78.4	76.4	80.8
34	Merkel refuses to go to Washington for a G7 summit	TRUE	Neutral	53.6	51.0	56.8
35	Obama's former aide suspects Russia is connected to riots in the U.S.	TRUE	Propaganda- consistent	77.8	74.5	82.5
36	Hitler's house in Austria will become a police station	TRUE	Neutral	48.6	52.3	43.4
37	U.S. Attorney General says "foreign forces" intervene in protests in America to escalate violence	TRUE	Propaganda- consistent	75.0	73.5	77.3
38	A powerful landslide in Norway washes eight houses into the sea	TRUE	Neutral	77.5	79.0	75.3
39	Brazil threatens to leave WHO because of "ideological bias"	TRUE	Neutral	60.5	60.8	60.0
40	Canada's prime minister bends a knee	TRUE	Neutral	69.6	70.0	68.9
41	In Lviv, a MiG-29 that had arrived for modernization was plundered for parts	TRUE	Propaganda- consistent	46.5	43.2	51.8
42	In the U.S., a treasure hunter finds a chest with precious stones worth a million dollars. The treasure was hidden ten years ago in the mountains by a local antique dealer	TRUE	Neutral	61.1	63.2	57.6
43	Peskov says there are no oligarchs in Russia	TRUE	Neutral	59.6	65.4	50.3

44	In London, archeologists find the ruins of the first British theatre	TRUE	Neutral	68.3	70.8	64.4
45	Ukraine gets the status of NATO enhanced opportunity partner	TRUE	Propaganda- inconsistent	44.1	48.2	37.9
46	In May, the Polish military occupied a part of the Czech Republic. Poland explains it was an "accident" and a "misunderstanding"	TRUE	Neutral	24.3	23.6	25.2
47	Kyrgyz prime minister resigns over the radio frequency sale scandal	TRUE	Neutral	39.9	39.8	40.1
48	A passenger on a train in Switzerland forgot a bag of gold in a car	TRUE	Neutral	40.3	40.1	40.7
49	In Putin's residence, a disinfection tunnel is installed to protect from coronavirus. Everyone who passes it is covered with a "dispersed water mist"	TRUE	Propaganda- inconsistent	63.2	65.8	59.4
50	Protesters in New York poisoned policemen with milkshakes with added bleach	FALSE	Propaganda- consistent	84.7	15.5	15.1

*Note:* Stories 1-30 are 'pre-selected,' and stories 31-50 are 'recent.' Stories 1-14 and 31-50 included in the first quiz, stories 15-30 included in the second quiz. Accuracy is the percent of respondents who correctly recognized the respective story as true or false. The last two columns present the percent of those who evaluated the corresponding story as true among Putin supporters and among Putin critics, respectively. Sample is limited to respondents with non-missing data on gender, age, education, and media usage. See the text for details.

## Supplementary Studies: OMI and Levada Surveys

I conducted two other surveys in which I asked citizens to evaluate news stories, Study 3 and Study 4. Study 3 was embedded in a nationally representative omnibus survey by the Russian polling firm Levada Center. The omnibus survey uses in-home visits and multi-stage random sampling; the sample is stratified by sociodemographic characteristics based on the recent census data and demographic statistics. The survey was fielded in August 2019, covering 140 cities, towns, and rural settlements in 50 Russian regions. The sample size is 1608 respondents.

Study 4 was fielded in June 2020 via the polling company OMI, which maintains a large online panel of respondents across Russia. From this panel, a sample of 2,100 participants was drawn. I implemented age and sex quotas derived from Levada Center's nationally representative sample (after restricting the sample to respondents who used the internet daily or almost every day). Respondents were drawn from all eight federal districts of Russia approximately in proportion to these districts' actual population.

In the Levada survey, three stories from Study 1 (the main 2019 survey) were included. In the OMI survey, four stories from Study 2 (the main 2020 survey) were included. In both supplementary surveys, stories were generally longer versions of stories included in the main surveys (see Tables A5 and A6). As in Studies 1 and 2, messages were shown with randomly assigned media outlets (their logos). In the analysis, I control for assigned news sources, as well as for individual-level characteristics.

Table A8 reports the differences in average story ratings between Putin supporters and critics in Study 2 and Study 4 with respect to four stories included in Study 4 (an analogous comparison cannot be drawn for Study 1 and Study 3 because Study 1, the main 2019 survey, did not ask about presidential approval).

Text	False?	Code in Study 1
The U.S. submarine Hartford froze into Arctic ice during military exercises. The submarine was supposed to rehearse a Tomahawk launch against a hypothetical aggressor—Russian ships. But something went wrong, and the submarine could not rise to the surface. A helicopter had to be called in order to save the vessel from the captivity of ice	FALSE	3
The Ukrainian economy is growing at a slower rate than the world economy, but faster than the Russian economy. According to analysts, in 2019 the world's GDP will grow by almost 4 percent, Ukrainian GDP by less than 3 percent, and Russian GDP by only 1.6 percent. The Ukrainian economy has been growing faster than the Russian economy for the fourth year in a row	TRUE	9
For 80% of Russian families, it is difficult to buy all the necessary goods and "make ends meet." This is what new research by the Federal service of government statistics says. More than half of the families cannot replace the simplest furniture that falls into disrepair	TRUE	13

Table A5: News messages evaluated in Study 3 (the Levada survey)

Text	False?	Code in Study
		2
The American leader Denald Trump weighed in on the relations between the United	TDITE	7
The American leader Donald Trump weighed in on the relations between the onned	INUE	/
States and Russia. We have a very good relationship with Russia, we have worked		
together on the oil deal, said the U.S. president. Trump thanked the Russian		
president Vladimir Putin for the deal and said that he "acted like a real gentleman"		
A new study published by the U.S. National Academy of Sciences says that the first	FALSE	10
person to be infected by the coronavirus of the new kind was not in China but in		
America. According to the scientists, this happened between late September and		
early December 2019. The outbreak of the disease in the Chinese city Wuhan was		
caused by a mutated version of this virus		
Russia is again bringing in uranium waste from Germany. In the 2000s, this practice	TRUE	11
was stopped after protests, but it resumed in 2019. In total, 12 thousand tons of such		
waste are expected to be sent to Russia		
In Italy, because of the pandemic, several dozens of mafia bosses will be let out of	TRUE	19
prison. Those considered are mafia members older than 70 and those who suffer		
chronic diseases. Among them are one of the most influential members of Sicily's		
Cosa Nostra, Francesco Bonura, who is 78 and doing his 23-year-long stint in prison,		
and one of the bosses of the Neapolitan Camorra Raffaele Cuttolo, who is serving		
multiple life sentences for murders		
1		

## Table A6: News messages evaluated in Study 4 (the OMI survey)

### Table A7: Evaluations of 3 stories in Studies 1 (main 2019 survey) and 3 (Levada survey)

			Average story rating,	%
Story code	Veracity	Study 1	Study 3, Putin supporters	Study 3, Putin critics
3	FALSE	31.7	60.6	46.1
9	TRUE	28.1	32.2	39.6
13	TRUE	79.7	77.6	86.9

*Note:* Demographic weights applied.

### Table A8: Evaluations of 4 stories in Studies 2 (main 2020 survey) and 4 (OMI survey)

			Average stor	y rating, %
Story code	Veracity	Subgroup	Study 2	Study 4
TRUE Putir		Putin critics	46.3	37.5
7	TRUE	Putin supporters	55.9	48.8
	FALSE	Putin critics	40.1	40.8
10	FALSE	Putin supporters	52.0	52.6
	TRUE	Putin critics	65.1	62.0
11	TRUE	Putin supporters	42.5	47.9
	TRUE	Putin critics	34.3	24.3
19	TRUE	Putin supporters	40.7	23.2

*Note:* Demographic weights applied.

# **Additional Figures**



Figure A2: Contrasts and 95% confidence intervals from linear regressions of story ratings on media usage categories and covariates. Coefficients are relative to the reference category: those who use neither state-run nor independent media.



Figure A3: Coefficients and 95% confidence intervals from linear regressions of story ratings on age subgroups and covariates. Story fixed effects included. Coefficients are relative to the reference category: age 18-24.



# Discernment rates for Putin supporters and critics

Figure A4: Discernment rate (the difference in the average truthfulness rating between true and false stories) for Putin supporters and critics, given the political direction of stories. Means and 95% confidence intervals from linear regressions of story ratings on regime support, political direction of stories, and the false story dummy. Covariate-adjusted model controls for media usage, age, education, and story-level covariates. Data from Study 2.

# **Regression Models**

	Study 2	Study 2	Study 2	Study 2	Study 1	Study 1	Study 1	Study 1
False	$0.362^{***}$	$0.364^{***}$	$0.363^{***}$	$0.331^{***}$	$0.550^{***}$	$0.546^{***}$	$0.547^{***}$	$0.551^{***}$
True	(0.004) $0.531^{***}$	0.541***	0.544***	(0.000)	0.481***	0.496***	0.496***	0.483***
Quiz 2	(0.004) $-0.062^{***}$	(0.002) $-0.057^{***}$	(0.002) $-0.059^{***}$		(0.002) $-0.140^{***}$	(0.001) $-0.133^{***}$	(0.001) $-0.132^{***}$	(0.002) $-0.147^{***}$
True*Quiz 2	(0.011) $0.077^{***}$	(0.005) 0.073***	(0.004) 0.075***		(0.010) $0.161^{***}$	(0.004) 0.150***	(0.004) 0.150***	(0.011) $0.168^{***}$
True, other	(0.012)	(0.006)	(0.006)	0.493***	(0.013)	(0.005)	(0.005)	(0.014)
True, Yandex				(0.005) $0.573^{***}$ (0.006)				
VK				(0.000)				-0.002
True*VK								(0.008) $-0.019^*$
Quiz 2*VK								(0.009) $0.051^{*}$ (0.025)
True*Quiz 2*VK								(0.023) -0.038 (0.027)
Num.Obs. Weights	299 812 Yes	299 812 No	385 468 No	299 812 Yes	584 632 Yes	584 632 No	632 717 No	584 632 Yes

### Table A9: Discernment in Studies 1 and 2

+ p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

*Note:* Coefficients from linear regression models. Dependent variable is story rating (true/false). Standard errors clustered on respondent in parentheses. Columns 1, 4, 5, and 8 use demographic weights. Sample is limited to observations with non-missing data on gender, age, and education, except Columns 3 and 7.

	Study 2	Study 1			
Quiz 1	0.553***	0.471***			
	(0.004)	(0.002)			
Quiz 2	$0.613^{***}$	$0.540^{***}$			
	(0.005)	(0.006)			
Num.Obs.	299812	584632			
+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001					

Table A10: Accuracy rates in Studies 1 and 2

Note:

Coefficients from linear regression models. Demographic weights applied. Standard errors clustered on respondent in parentheses. Dependent variable is correct response (rating true stories as true and rating false stories as false).

Table A11: Discernment in Study 2 (main 2020 survey), accounting for assigned news sources

	1	2	3	4
False	0.362***	0.358***	0.292***	0.273***
	(0.004)	(0.012)	(0.005)	(0.009)
True	$0.531^{***}$	$0.513^{***}$	$0.542^{***}$	$0.523^{***}$
	(0.004)	(0.011)	(0.005)	(0.009)
Quiz 2	$-0.062^{***}$	$-0.102^{***}$	0.008	0.009
	(0.011)	(0.023)	(0.011)	(0.011)
True*Quiz 2	$0.077^{***}$	$0.124^{***}$	-0.005	-0.005
	(0.012)	(0.025)	(0.013)	(0.013)
Num.Obs.	299812	45711	248110	248110
Sample	Full	No sources	Full	Full
Stories	All	All	Except 3	Except 3
Control for sources	No	No	No	Yes

*Note:* Coefficients from linear regression models. Dependent variable is story rating (true/false). Demographic weights applied. Standard errors clustered on respondent in parentheses. Column 1 is the baseline Study 2 model. Column 2 replicates Column 1, limiting the sample to respondents who saw all stories without randomly assigned news sources. Column 3 replicates Column 1, dropping 3 stories for which news sources were not assigned randomly (stories 1, 2, and 3 in Study 2). Column 4 replicates Column 3, controlling for assigned news sources. See text for additional discussion.

	Study 2	Study 2	Study 1	Study 1
False	0.362***	0.391***	0.550***	0.609***
	(0.004)	(0.007)	(0.003)	(0.003)
True	$0.531^{***}$	$0.556^{***}$	$0.481^{***}$	$0.491^{***}$
	(0.004)	(0.005)	(0.002)	(0.002)
Quiz 2	$-0.062^{***}$	$-0.084^{***}$	$-0.140^{***}$	$-0.146^{***}$
	(0.011)	(0.012)	(0.010)	(0.012)
True*Quiz 2	$0.077^{***}$	0.083***	0.161***	$0.119^{***}$
-	(0.012)	(0.014)	(0.013)	(0.014)
Num.Obs.	299812	148580	584632	404256
Stories	All	Selected	All	Selected

Table A12: Discernment in Studies 1 and 2 (excluding potentially ambiguous stories)

*Note:* Coefficients from linear regression models. Standard errors clustered on respondent in parentheses. Columns 1 and 3 are baseline discernment regressions. Columns 2 and 4 replicate these baseline models, dropping stories that may potentially be seen as ambiguous (e.g., contain additional claims or mention someone's beliefs). The model in Column 2 includes these stories from Study 2: 1, 2, 6, 7, 8, 14, 15, 16, 19, 20, 21, 22, 23, 24, 26, 27, 29, 30, 31, 32, 33, 34, 36, 37, 38, 40, 41,44, 45, 48, 49, 50. The model in Column 4 includes these stories from Study 1: 1, 2, 5, 6, 7, 9, 11, 12, 13, 15, 16, 17, 19, 21, 22, 23, 24, 26, 27, 28, 29, 31, 32. Demographic weights applied.

Study 2 Study 2 Study 2 Study 2 Study 1 Study 1 Study 1 Study 1 0.536\*\*\* 0.586\*\*\* 0.230\*\*\* 0.362\*\*\* 0.581\*\*\* 0.791\*\*\* 0.418\*\*\* 0.412\*\*\* (Intercept) (0.027)(0.037)(0.021)(0.033)(0.036)(0.049)(0.022)(0.030)Media: Only/mostly state-run  $0.034^{*}$ 0.0200.0010.0020.027 +-0.003-0.020\*-0.016(0.010)(0.014)(0.014)(0.020)(0.014)(0.016)(0.010)(0.015)Media: State and critical 0.004-0.0040.034\*\* 0.027 +-0.0110.0060.022 +0.022(0.016)(0.020)(0.011)(0.016)(0.017)(0.020)(0.013)(0.019)Media: Only/mostly critical -0.032\*-0.0190.049\*\*\* 0.040\*-0.071\*\*\*-0.0280.059\*\*\* 0.045\*\* (0.016)(0.022)(0.012)(0.017)(0.017)(0.019)(0.012)(0.017)Age: 25-34 -0.005-0.018-0.018 $-0.043^{*}$ 0.002-0.0280.017 $0.032^{*}$ (0.026)(0.015)(0.020)(0.018)(0.021)(0.011)(0.016)(0.017)Age: 35-44 -0.004-0.028-0.006-0.016-0.008-0.061\*\*0.009 0.025(0.016)(0.026)(0.014)(0.019)(0.020)(0.023)(0.012)(0.017)-0.087\*\*\* Age: 45-54 -0.0290.005-0.0010.014-0.020-0.0040.016(0.017)(0.027)(0.015)(0.019)(0.020)(0.023)(0.012)(0.018)-0.097\*\*\*Age: 55-64 -0.012-0.069\*\*-0.010 $-0.043^{*}$ -0.0040.0020.028(0.018)(0.026)(0.015)(0.020)(0.022)(0.026)(0.014)(0.021) $-0.093^{***}$ -0.090\*\*Age: 65+ -0.005-0.072\*-0.035 +-0.006-0.015-0.001(0.029)(0.023)(0.023)(0.018)(0.024)(0.025)(0.031)(0.015)Education 0.0040.033\*\* 0.019\*\*  $0.022^{*}$ -0.0030.001 $0.013^{*}$ 0.026\*\* (0.011)(0.009)(0.009)(0.008)(0.006)(0.008)(0.010)(0.006) $-0.037^{***}$ Female 0.0080.010 $-0.059^{***}$ 0.022 +0.026 +-0.009-0.012(0.010)(0.014)(0.008)(0.011)(0.012)(0.014)(0.008)(0.012)VK 0.008-0.007-0.013-0.021(0.020)(0.026)(0.019)(0.013)113796 181727 Num.Obs.  $38\,574$  $78\,687$  $183\,606$ 109664  $389\,293$  $185\,833$ Stories All Neutral All Neutral All Neutral All Neutral Veracity False False True True False False True True

Table A13: Discernment depending on individual-level characteristics (with demographic weights)

*Note:* Coefficients from linear regression models. Standard errors clustered on respondent in parentheses. Reference categories are as follows. Media usage: neither state-run nor independent media. Age: 18-24. Sample is limited to false stories in Columns 1, 2, 5, 6, and to true stories in Columns 3, 4, 7, 8. Only neutral stories in Columns 2, 4, 6, 8. Story fixed effects included. Demographic weights applied.

	Study 2	Study 2	Study 2	Study 2	Study 1	Study 1	Study 1	Study 1
(Intercept)	0.581***	0.612***	0.220***	0.391***	0.513***	0.724***	0.377***	0.391***
	(0.018)	(0.027)	(0.014)	(0.021)	(0.021)	(0.026)	(0.015)	(0.021)
Media: Only/mostly state-run	$0.017^{*}$	-0.005	-0.002	-0.012	0.032***	0.005	-0.010*	-0.002
	(0.007)	(0.011)	(0.006)	(0.008)	(0.007)	(0.008)	(0.005)	(0.007)
Media: State and critical	0.001	0.000	0.039***	0.023**	-0.015 +	-0.006	$0.035^{***}$	0.036***
	(0.008)	(0.012)	(0.006)	(0.009)	(0.008)	(0.010)	(0.006)	(0.008)
Media: Only/mostly critical	$-0.033^{***}$	-0.014	$0.055^{***}$	$0.041^{***}$	$-0.069^{***}$	-0.024*	$0.055^{***}$	$0.039^{***}$
	(0.008)	(0.013)	(0.007)	(0.009)	(0.008)	(0.010)	(0.006)	(0.009)
Age: 25-34	0.015	0.015	-0.017 +	-0.036*	0.006	-0.032*	0.012	0.021 +
	(0.013)	(0.019)	(0.010)	(0.014)	(0.011)	(0.015)	(0.008)	(0.011)
Age: 35-44	0.006	-0.018	-0.005	-0.018	-0.001	-0.064***	0.013	$0.029^{*}$
	(0.012)	(0.019)	(0.010)	(0.014)	(0.013)	(0.016)	(0.008)	(0.012)
Age: 45-54	0.002	$-0.055^{**}$	-0.005	-0.035*	-0.001	-0.082***	-0.004	0.008
	(0.013)	(0.019)	(0.010)	(0.014)	(0.012)	(0.016)	(0.008)	(0.012)
Age: 55-64	-0.003	$-0.068^{***}$	-0.010	$-0.044^{**}$	-0.011	$-0.106^{***}$	-0.012	0.000
	(0.013)	(0.019)	(0.010)	(0.014)	(0.013)	(0.017)	(0.009)	(0.013)
Age: 65+	-0.031*	$-0.088^{***}$	$-0.042^{***}$	$-0.098^{***}$	-0.015	$-0.134^{***}$	-0.019 +	-0.003
	(0.015)	(0.021)	(0.012)	(0.016)	(0.016)	(0.020)	(0.011)	(0.016)
Education	0.001	0.021*	$0.018^{***}$	0.018*	0.000	0.012	0.012*	$0.024^{**}$
	(0.007)	(0.010)	(0.005)	(0.007)	(0.007)	(0.009)	(0.005)	(0.008)
Female	0.011 +	0.006	$-0.048^{***}$	$-0.029^{***}$	$0.028^{***}$	$0.039^{***}$	$-0.017^{***}$	$-0.016^{**}$
	(0.006)	(0.008)	(0.004)	(0.006)	(0.006)	(0.007)	(0.004)	(0.006)
VK					0.028*	0.019	0.000	-0.001
					(0.013)	(0.016)	(0.009)	(0.012)
Num.Obs.	113796	38574	181727	78687	183606	109664	389293	185833
Stories	All	Neutral	All	Neutral	All	Neutral	All	Neutral
Veracity	False	False	True	True	False	False	True	True

Table A14: Discernment depending on individual-level characteristics (unweighted)

*Note:* Coefficients from linear regression models. Standard errors clustered on respondent in parentheses. Reference categories are as follows. Media usage: neither state-run nor independent media. Age: 18-24. Sample is limited to false stories in Columns 1, 2, 5, 6, and to true stories in Columns 3, 4, 7, 8. Only neutral stories in Columns 2, 4, 6, 8. Story fixed effects included.

Table A15: Discernment depending on individual-level characteristics (controlling for assigned sources)

	Study 2	Study 2	Study 2	Study 2	Study 1	Study 1	Study 1	Study 1
(Intercept)	0.532***	0.587***	0.221***	0.327***	0.605***	0.815***	0.415***	0.410***
· · · ·	(0.034)	(0.047)	(0.025)	(0.034)	(0.039)	(0.054)	(0.024)	(0.033)
Media: Only/mostly state-run	0.029 +	0.024	0.003	0.003	0.027 +	-0.003	-0.020*	-0.016
	(0.015)	(0.023)	(0.010)	(0.014)	(0.014)	(0.015)	(0.010)	(0.015)
Media: State and critical	0.004	-0.006	0.033**	0.027 +	-0.011	0.005	0.023 +	0.022
	(0.018)	(0.024)	(0.012)	(0.016)	(0.017)	(0.020)	(0.013)	(0.019)
Media: Only/mostly critical	-0.026	-0.024	$0.045^{***}$	0.040*	-0.071***	-0.029	$0.059^{***}$	$0.045^{**}$
	(0.017)	(0.025)	(0.012)	(0.017)	(0.017)	(0.019)	(0.012)	(0.017)
Age: 25-34	-0.019	-0.043	-0.017	-0.044*	0.002	-0.028	0.017	$0.033^{*}$
	(0.020)	(0.033)	(0.015)	(0.020)	(0.018)	(0.021)	(0.011)	(0.016)
Age: 35-44	-0.027	-0.069*	-0.002	-0.017	-0.008	-0.061**	0.010	0.027
	(0.019)	(0.033)	(0.015)	(0.019)	(0.020)	(0.023)	(0.012)	(0.017)
Age: 45-54	-0.009	-0.071*	0.008	-0.022	-0.004	$-0.088^{***}$	0.000	0.017
	(0.020)	(0.034)	(0.015)	(0.019)	(0.020)	(0.023)	(0.013)	(0.018)
Age: 55-64	-0.033	$-0.112^{***}$	-0.008	-0.046*	-0.004	$-0.099^{***}$	0.002	0.028
	(0.021)	(0.033)	(0.015)	(0.020)	(0.022)	(0.026)	(0.014)	(0.021)
Age: 65+	-0.025	$-0.109^{**}$	-0.034 +	$-0.095^{***}$	-0.006	$-0.092^{**}$	-0.014	0.000
	(0.026)	(0.036)	(0.018)	(0.024)	(0.025)	(0.031)	(0.016)	(0.023)
Education	0.007	$0.035^{**}$	$0.019^{**}$	$0.023^{**}$	-0.002	0.001	$0.013^{*}$	$0.026^{**}$
	(0.009)	(0.012)	(0.006)	(0.009)	(0.008)	(0.010)	(0.006)	(0.009)
Female	0.003	0.006	-0.058***	$-0.037^{***}$	0.022 +	0.026 +	-0.009	-0.013
	(0.011)	(0.016)	(0.008)	(0.010)	(0.012)	(0.014)	(0.008)	(0.012)
VK					0.007	-0.008	-0.013	-0.020
					(0.020)	(0.026)	(0.013)	(0.019)
Num.Obs.	84909	24100	167319	78687	183606	109664	389293	185833
Stories	All	Neutral	All	Neutral	All	Neutral	All	Neutral
Veracity	False	False	True	True	False	False	True	True

*Note:* Coefficients from linear regression models. Demographic weights applied. Standard errors clustered on respondent in parentheses. Reference categories are as follows. Media usage: neither state-run nor independent media. Age: 18-24. Sample is limited to false stories in Columns 1, 2, 5, 6, and to true stories in Columns 3, 4, 7, 8. Only neutral stories in Columns 2, 4, 6, 8. Story fixed effects included. All models control for randomly assigned news sources (see text for details).

	Study 2	Study 2	Study 1	Study 1	Study 2	Study 2	Study 1	Study 1
(Intercept)	0.313***	0.414***	0.508***	0.510***	0.070	-0.111	-0.027 +	-0.084 +
· • •	(0.020)	(0.029)	(0.025)	(0.032)	(0.044)	(0.222)	(0.015)	(0.048)
Media: Only/mostly state-run	0.039*	0.023	0.022	-0.020	$-0.033^{***}$	-0.036	$-0.093^{***}$	$-0.146^{***}$
	(0.016)	(0.021)	(0.014)	(0.016)	(0.010)	(0.037)	(0.008)	(0.026)
Media: State and critical	0.003	0.001	-0.024	-0.019	0.053***	$0.179^{***}$	$0.032^{**}$	0.202***
	(0.018)	(0.024)	(0.017)	(0.021)	(0.012)	(0.046)	(0.010)	(0.035)
Media: Only/mostly critical	-0.045*	-0.028	$-0.081^{***}$	-0.048*	0.109***	$0.253^{***}$	$0.138^{***}$	$0.485^{***}$
	(0.018)	(0.026)	(0.017)	(0.021)	(0.012)	(0.047)	(0.010)	(0.041)
True	$0.212^{***}$	0.161***	-0.021	-0.006				
	(0.013)	(0.018)	(0.014)	(0.018)				
Quiz 2	0.000	$-0.097^{***}$	$-0.042^{***}$	$-0.022^{**}$	0.188***	-0.046	$0.122^{***}$	$-0.326^{***}$
	(0.008)	(0.012)	(0.006)	(0.007)	(0.019)	(0.094)	(0.028)	(0.079)
Age: 25-34	-0.017	-0.043*	0.012	0.011	0.018	-0.049	-0.002	0.072
-	(0.012)	(0.018)	(0.010)	(0.014)	(0.048)	(0.245)	(0.016)	(0.048)
Age: 35-44	-0.006	-0.020	0.004	-0.005	0.004	0.009	-0.004	0.010
-	(0.012)	(0.018)	(0.011)	(0.015)	(0.046)	(0.236)	(0.016)	(0.050)
Age: 45-54	0.007	-0.023	-0.001	-0.020	0.025	0.258	-0.017	-0.015
-	(0.012)	(0.017)	(0.012)	(0.015)	(0.047)	(0.234)	(0.016)	(0.051)
Age: 55-64	-0.012	$-0.052^{**}$	0.000	-0.016	0.018	0.068	-0.015	-0.022
0	(0.013)	(0.018)	(0.013)	(0.017)	(0.046)	(0.239)	(0.020)	(0.059)
Age: 65+	-0.023	$-0.088^{***}$	-0.011	-0.032	-0.004	0.008	-0.025	-0.077
-	(0.017)	(0.022)	(0.014)	(0.020)	(0.051)	(0.256)	(0.025)	(0.068)
Education	0.016**	0.026***	0.007	$0.017^{*}$	0.009	0.141*	0.016+	0.060*
	(0.005)	(0.008)	(0.005)	(0.007)	(0.015)	(0.063)	(0.009)	(0.029)
Female	$-0.041^{***}$	-0.028**	0.003	0.001	$-0.053^{**}$	-0.200*	-0.029*	-0.038
	(0.007)	(0.010)	(0.007)	(0.009)	(0.019)	(0.083)	(0.013)	(0.037)
Propaganda-consistent	0.060***		-0.104***					
	(0.007)		(0.007)					
Propaganda-inconsistent	-0.048***		$-0.036^{***}$					
10	(0.008)		(0.005)					
Media: Only/mostly state-run*True	-0.038*	-0.019	-0.039*	0.015				
	(0.016)	(0.023)	(0.016)	(0.023)				
Media: State and critical*True	0.035 +	0.029	$0.054^{**}$	0.055 +				
	(0.018)	(0.025)	(0.021)	(0.030)				
Media: Only/mostly critical*True	0.101***	0.076**	$0.146^{***}$	$0.104^{**}$				
	(0.019)	(0.028)	(0.022)	(0.032)				
VK			-0.005	-0.016			-0.023	-0.025
			(0.013)	(0.017)			(0.016)	(0.055)
Media: Only/mostly state-run*Quiz 2					-0.010	0.168	$0.094^{**}$	0.126
					(0.026)	(0.111)	(0.033)	(0.095)
Media: State and critical*Quiz 2					-0.062*	-0.008	0.002	-0.205 +
					(0.030)	(0.150)	(0.041)	(0.108)
Media: Only/mostly critical*Quiz 2					-0.004	0.181	-0.023	$-0.466^{***}$
					(0.030)	(0.136)	(0.041)	(0.122)
Ni Oh	005 500	117961	F 70 800	205 407	10500	10500	20000	20.000
Num.ODS.	295523	117261	572899	295 497	18582	18582	36088	36088
Stories	AII	Neutral	All	Neutral	All	All	All	All

### Table A16: Overall and individual-level discernment depending on media usage

+ p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

*Note:* Coefficients from linear regression models. Demographic weights applied. Standard errors clustered on respondent in parentheses. Reference categories are as follows. Media usage: neither state-run nor independent media. Age: 18-24. The dependent variable is story rating in columns 1, 2, 3, 4, and individual discernment rate (see text for details) in Columns 5, 6, 7, 8 (additive rate in Columns 5 and 7 and normalized multiplicative rate in Columns 6 and 8).

	Study 2 (main, 2020)	Study 4 (OMI)
(Intercept)	0.380***	0.389***
	(0.058)	(0.043)
Media: Only/mostly state-run	0.073***	$0.084^{*}$
	(0.022)	(0.041)
Media: State and critical	$0.052^{*}$	-0.038
	(0.025)	(0.070)
Media: Only/mostly critical	0.024	0.040
	(0.027)	(0.078)
Story: 10	0.023	0.031
	(0.024)	(0.050)
Story: 11	0.082**	0.109*
	(0.025)	(0.050)
Story: 19	$-0.134^{*}$	$-0.232^{***}$
	(0.056)	(0.043)
Approval	0.014	0.009
	(0.016)	(0.019)
Age: 25-34	-0.002	0.001
	(0.022)	(0.021)
Age: 35-44	0.010	0.014
	(0.022)	(0.022)
Age: 45-54	0.031	-0.006
	(0.023)	(0.025)
Age: 55-64	0.051*	0.023
	(0.024)	(0.028)
Age: 65+	0.048	0.094
	(0.033)	(0.064)
Education	0.014	0.014
	(0.011)	(0.015)
Female	-0.020	-0.032 +
	(0.015)	(0.016)
Media: Only/mostly state-run*Story: 10	-0.022	0.016
	(0.030)	(0.059)
Media: State and critical*Story: 10	$-0.137^{***}$	-0.020
	(0.035)	(0.103)
Media: Only/mostly critical*Story: 10	$-0.219^{***}$	-0.139
	(0.035)	(0.110)
Media: Only/mostly state-run*Story: 11	-0.162***	-0.127*
	(0.031)	(0.060)
Media: State and critical*Story: 11	0.035	0.223*
	(0.035)	(0.097)
Media: Only/mostly critical^Story: 11	0.195^^^	0.214^
	(0.035)	(0.105)
Media: Unly/mostly state-run*Story: 19	-0.049	-0.017
Madia Chata and arithe 1904 and 10	(0.069)	(0.054)
Media: State and critical <sup>story</sup> : 19	0.101	(0.000)
Madia Only/mathe	(0.080)	(0.092)
Media: Uniy/mostly critical^Story: 19	0.028	0.174
	(0.084)	(0.108)
Num.Obs.	43095	7030

Table A17: Discernment depending on media usage, Studies 2 and 4

*Note:* Coefficients from linear regression models. Standard errors clustered on respondent in parentheses. Reference categories are as follows. Media usage: neither state-run nor independent media. Age: 18-24. Sample is limited to four stories included in Study 4 (OMI survey). Demographic weights applied.

	Study 2	Study 1	Study 2	Study 1
(Intercept)	0.527***	0.553***	0.219***	0.443***
	(0.033)	(0.053)	(0.025)	(0.025)
Sources used: 1	0.025	0.005	-0.002	-0.008
	(0.026)	(0.045)	(0.019)	(0.016)
Sources used: 2-4	0.013	-0.015	0.021	-0.010
	(0.023)	(0.044)	(0.017)	(0.014)
Sources used: 5+	0.007	0.025	$0.046^{**}$	0.016
	(0.023)	(0.045)	(0.018)	(0.014)
Age: 25-34	-0.002	0.009	-0.020	0.006
	(0.017)	(0.017)	(0.015)	(0.011)
Age: 35-44	0.005	0.009	-0.008	-0.006
	(0.015)	(0.019)	(0.014)	(0.012)
Age: 45-54	0.023	0.010	0.003	-0.014
	(0.017)	(0.019)	(0.014)	(0.012)
Age: 55-64	-0.002	0.013	-0.013	-0.016
	(0.017)	(0.021)	(0.015)	(0.014)
Age: 65+	0.002	0.000	-0.033 +	-0.027 +
	(0.023)	(0.025)	(0.018)	(0.016)
Education	0.003	-0.010	$0.018^{**}$	$0.018^{**}$
	(0.008)	(0.008)	(0.006)	(0.006)
Female	0.016	$0.037^{***}$	$-0.063^{***}$	-0.009
	(0.010)	(0.011)	(0.008)	(0.008)
VK		0.021		-0.021
		(0.020)		(0.013)
Num.Obs.	115440	187368	184372	397264
Veracity	False	False	True	True

Table A18: Discernment depending on the number of sources one uses

*Note:* Coefficients from linear regression models. Demographic weights applied. Standard errors clustered on respondent in parentheses. Reference categories are as follows. Sources used: 0. Age: 18-24. Story fixed effects included.

	Study 2	Study 2	Study 1	Study 1	Study 2	Study 2	Study 1	Study 1
(Intercept)	0.126***	-0.094	0.000	$-0.103^{*}$	0.083+	-0.191	$-0.048^{**}$	-0.080
	(0.021)	(0.094)	(0.017)	(0.050)	(0.045)	(0.228)	(0.017)	(0.053)
Age: 25-34	-0.025 +	-0.015	$-0.037^{***}$	0.112***	0.018	-0.049	-0.001	0.075
5	(0.014)	(0.053)	(0.009)	(0.032)	(0.048)	(0.245)	(0.016)	(0.047)
Age: 35-44	-0.040**	-0.052	-0.072***	0.068*	0.004	0.009	-0.004	0.014
-	(0.013)	(0.052)	(0.010)	(0.033)	(0.046)	(0.236)	(0.016)	(0.050)
Age: 45-54	$-0.048^{***}$	-0.016	-0.068***	$0.112^{**}$	0.025	0.258	-0.019	-0.017
-	(0.013)	(0.052)	(0.010)	(0.035)	(0.047)	(0.233)	(0.016)	(0.051)
Age: 55-64	-0.027*	-0.092 +	$-0.082^{***}$	-0.043	0.018	0.068	-0.015	-0.021
-	(0.013)	(0.054)	(0.012)	(0.038)	(0.046)	(0.239)	(0.020)	(0.057)
Age: 65+	-0.027	$-0.216^{**}$	-0.051**	-0.052	-0.004	0.008	-0.024	-0.076
	(0.018)	(0.069)	(0.016)	(0.056)	(0.051)	(0.256)	(0.026)	(0.068)
Quiz 2	$0.126^{*}$	-0.073	0.027	$-0.258^{**}$	$0.174^{***}$	0.038	$0.170^{***}$	$-0.332^{***}$
	(0.049)	(0.256)	(0.031)	(0.083)	(0.014)	(0.062)	(0.018)	(0.049)
Media: Only/mostly state-run	-0.043 +	0.122	$-0.049^{**}$	-0.083 +	-0.042 +	0.122	-0.048**	-0.079 +
	(0.023)	(0.102)	(0.015)	(0.046)	(0.023)	(0.101)	(0.016)	(0.046)
Media: State and critical	-0.005	0.172	0.028	0.091	-0.005	0.172	0.029	0.095
	(0.027)	(0.138)	(0.020)	(0.058)	(0.027)	(0.138)	(0.020)	(0.058)
Media: Only/mostly critical	0.106***	$0.426^{***}$	$0.126^{***}$	$0.252^{***}$	0.106***	$0.425^{***}$	$0.124^{***}$	$0.256^{***}$
	(0.028)	(0.126)	(0.020)	(0.062)	(0.028)	(0.126)	(0.020)	(0.062)
Education	0.009	0.141*	0.017 +	0.061*	$0.015^{*}$	$0.097^{***}$	$0.028^{***}$	0.106***
	(0.015)	(0.063)	(0.010)	(0.029)	(0.007)	(0.027)	(0.005)	(0.019)
Female	$-0.053^{**}$	-0.200*	-0.030*	-0.043	$-0.053^{**}$	-0.200*	-0.030*	-0.047
	(0.019)	(0.083)	(0.013)	(0.037)	(0.019)	(0.083)	(0.013)	(0.037)
Age: 25-34*Quiz 2	0.049	-0.031	$0.112^{**}$	-0.101				
	(0.055)	(0.280)	(0.038)	(0.113)				
Age: 35-44*Quiz 2	0.050	0.073	$0.182^{***}$	-0.138				
	(0.052)	(0.269)	(0.038)	(0.110)				
Age: 45-54*Quiz 2	0.080	0.297	$0.142^{***}$	$-0.286^{**}$				
	(0.053)	(0.265)	(0.037)	(0.109)				
Age: 55-64*Quiz 2	0.051	0.177	$0.174^{***}$	0.000				
	(0.052)	(0.270)	(0.043)	(0.112)				
Age: 65+*Quiz 2	0.028	0.244	0.099 +	-0.081				
	(0.059)	(0.285)	(0.056)	(0.142)				
VK			-0.021	-0.015			-0.021	-0.020
			(0.016)	(0.054)			(0.016)	(0.054)
Education*Quiz 2					-0.006	0.046	-0.024	-0.094 +
					(0.016)	(0.068)	(0.019)	(0.054)
Num.Obs.	18582	18582	36088	36088	18582	18582	36088	36 088

Table A19: Individual-level discernment depending on age and education

*Note:* Coefficients from linear regression models. Demographic weights applied. Standard errors clustered on respondent in parentheses. Reference categories are as follows. Media usage: neither state-run nor independent media. Age: 18-24. The dependent variable is individual discernment rate (see text for details; additive rate in Columns 1, 3, 5, 7, and normalized multiplicative rate in Columns 2, 4, 6, 8).

	Study 2	Study 4	Study 2	Study 4
(Intercept)	0.412***	0.396***	0.396***	0.388***
	(0.059)	(0.045)	(0.058)	(0.038)
Age: 25-34	0.017	0.047	0.000	0.001
1	(0.028)	(0.045)	(0.022)	(0.021)
Age: 35-44	(0.003)	0.056	(0.010)	(0.014)
Ago: 45 54	(0.027)	(0.045)	(0.022)	(0.022)
Age: 45-54	(0.013)	-0.007	(0.032)	-0.006
Age: 55-64	(0.028)	(0.032)	0.023)	(0.023)
Age: 55-64	(0.017)	(0.029)	(0.032)	(0.023)
Age: 65+	0.034	-0.033	0.050	0.094
iigoi oo	(0.040)	(0.135)	(0.033)	(0.064)
Story: 10	-0.096**	0.034	-0.022	0.078*
	(0.030)	(0.052)	(0.016)	(0.037)
Story: 11	0.027	0.066	0.071***	0.050
5	(0.031)	(0.052)	(0.016)	(0.036)
Story: 19	-0.013	$-0.211^{***}$	$-0.127^{***}$	$-0.205^{***}$
-	(0.104)	(0.048)	(0.037)	(0.035)
Approval	0.013	0.009	0.014	0.009
	(0.016)	(0.019)	(0.016)	(0.020)
Media: Only/mostly state-run	0.015	$0.052^{**}$	0.015	$0.052^{**}$
	(0.018)	(0.019)	(0.018)	(0.019)
Media: State and critical	0.051*	0.040	0.050*	0.040
	(0.023)	(0.034)	(0.023)	(0.035)
Media: Only/mostly critical	0.024	0.102**	0.025	0.102**
	(0.024)	(0.039)	(0.024)	(0.039)
Education	0.015	0.014	$0.047^{***}$	$0.062^{*}$
Formala	(0.011)	(0.015)	(0.013)	(0.031)
reinale	-0.022	$-0.032^{\circ}$	-0.021	-0.032+
Age: 25-34*Storr: 10	(0.015)	0.010)	(0.015)	(0.017)
Age. 25-54 Story: 10	-0.007	-0.044 (0.063)		
Age: 35-44*Story: 10	0.014	-0.026		
	(0.036)	(0.063)		
Age: 45-54*Storv: 10	0.095*	0.082		
<u> </u>	(0.038)	(0.073)		
Age: 55-64*Story: 10	0.102**	-0.019		
· •	(0.039)	(0.083)		
Age: 65+*Story: 10	0.076	0.051		
	(0.053)	(0.192)		
Age: 25-34*Story: 11	-0.006	-0.088		
	(0.039)	(0.063)		
Age: 35-44*Story: 11	0.018	-0.080		
	(0.038)	(0.063)		
Age: 45-54*Story: 11	0.041	-0.066		
	(0.038)	(0.073)		
Age: 55-64*Story: 11	0.087*	0.020		
A got (E   *C+ 11	(0.039)	(0.083)		
Age: 65+^Story: 11	0.076	0.299+		
A got 25 24*8to 10	(0.057)	(0.176)		
Age: 25-34"5tory: 19	-0.121	-0.053		
Age: 35-44*Storry 10	(0.121)	(0.088)		
лде. ээ-чч эюгу: 19	-0.071	-0.063 (0.058)		
Age: 45-54*Story, 19	-0.127	-0.012		
	(0.115)	(0.067)		
Age: 55-64*Story: 19	-0.113	-0.024		
	(0.116)	(0.076)		
Age: 65+*Story: 19	-0.147	0.158		
<u> </u>	(0.134)	(0.192)		
Education*Storv: 10	(	(	-0.100***	$-0.136^{**}$
·····			(0.017)	(0.044)
Education*Story: 11			-0.030+	0.012
2			(0.018)	(0.043)
Education*Story: 19			0.000	-0.066
-			(0.041)	(0.042)
Num Obs	42.005	7020	42005	7020
INUILLODS.	43093	1030	43093	1030

Table A20: Discernment depending on age and education, Studies 2 and 4

*Note:* Coefficients from linear regression models. Standard errors clustered on respondent in parentheses. Reference categories are as follows. Media usage: neither state-run nor independent media. Age: 18-24. Sample is limited to four stories included in Study 4 (story 10 is false, and the remaining stories are true). Demographic weights applied.

Table A21: Discernment depending on presidential approval and political direction of stories, Study 2

	1	2	3	4	5	6	7	8
(Intercept)	0.307***	0.267***	0.344***	0.308***	0.328***	0.205***	0.185***	0.575***
	(0.012)	(0.028)	(0.006)	(0.034)	(0.024)	(0.038)	(0.039)	(0.006)
Approval	0.018	0.052	-0.026**	0.020	-0.016 +	0.022	0.021	-0.028 **
* *	(0.017)	(0.041)	(0.009)	(0.018)	(0.009)	(0.021)	(0.021)	(0.010)
True	0.236***	0.234***	0.212***	0.231***	0.210***	0.303***	0.302***	
	(0.013)	(0.034)	(0.007)	(0.012)	(0.007)	(0.013)	(0.013)	
Propaganda-consistent	-0.003	0.051	$-0.039^{***}$	0.002	$-0.033^{***}$	0.050**	0.049**	$0.057^{***}$
	(0.014)	(0.034)	(0.008)	(0.014)	(0.008)	(0.016)	(0.016)	(0.009)
Propaganda-inconsistent	0.026	0.010	-0.018 +	0.022	-0.021*	0.089***	0.089***	-0.009
	(0.019)	(0.033)	(0.010)	(0.019)	(0.010)	(0.020)	(0.020)	(0.011)
Approval*True	-0.047*	-0.044	-0.005	-0.048*	-0.003	-0.049*	-0.049*	
	(0.020)	(0.054)	(0.011)	(0.020)	(0.011)	(0.022)	(0.022)	
Approval*Propaganda-consistent	0.087***	-0.013	0.129***	0.091***	0.130***	0.071**	0.071**	0.028 +
	(0.021)	(0.053)	(0.012)	(0.020)	(0.012)	(0.023)	(0.023)	(0.015)
Approval*Propaganda-inconsistent	$-0.148^{***}$	-0.130**	-0.088***	$-0.146^{***}$	$-0.087^{***}$	$-0.146^{***}$	$-0.147^{***}$	$-0.095^{***}$
	(0.027)	(0.049)	(0.014)	(0.027)	(0.014)	(0.028)	(0.028)	(0.017)
True*Propaganda-consistent	0.040*	0.049	0.075***	0.025	0.059***	-0.026	-0.025	
	(0.018)	(0.045)	(0.010)	(0.018)	(0.010)	(0.019)	(0.019)	
True*Propaganda-inconsistent	-0.024	0.020	0.009	-0.008	0.026*	-0.053*	-0.053*	
	(0.021)	(0.041)	(0.012)	(0.022)	(0.012)	(0.023)	(0.023)	
Approval*True*Propaganda-consistent	0.031	0.050	-0.017	0.029	-0.019	0.049	0.049	
	(0.028)	(0.071)	(0.016)	(0.028)	(0.015)	(0.030)	(0.030)	
Approval*True*Propaganda-inconsistent	0.002	-0.040	-0.030 +	0.003	-0.033 +	0.004	0.006	
	(0.032)	(0.072)	(0.017)	(0.032)	(0.017)	(0.034)	(0.034)	
Female				$-0.040^{***}$	-0.031***	$-0.043^{***}$	$-0.043^{***}$	
				(0.008)	(0.004)	(0.008)	(0.008)	
Education				0.018**	0.015**	0.019**	0.019**	
				(0.006)	(0.005)	(0.006)	(0.006)	
Age: 25-34				-0.015	-0.008	-0.018	-0.019	
				(0.013)	(0.009)	(0.014)	(0.014)	
Age: 35-44				0.000	0.002	-0.002	-0.003	
				(0.013)	(0.009)	(0.014)	(0.014)	
Age: 45-54				0.013	-0.002	0.010	0.009	
				(0.013)	(0.009)	(0.014)	(0.014)	
Age: 55-64				-0.007	-0.005	-0.009	-0.011	
				(0.014)	(0.009)	(0.015)	(0.015)	
Age: 65+				-0.019	$-0.036^{***}$	-0.022	-0.023	
				(0.018)	(0.010)	(0.019)	(0.019)	
Quiz 2				-0.005	0.001	0.015	0.016 +	
				(0.009)	(0.005)	(0.009)	(0.009)	
Media: Only/mostly state-run				0.012	0.007	0.012	0.011	
				(0.010)	(0.006)	(0.011)	(0.011)	
Media: State and critical				$0.025^{*}$	$0.029^{***}$	0.026*	0.026*	
				(0.012)	(0.006)	(0.013)	(0.013)	
Media: Only/mostly critical				0.020	0.030***	0.021	0.020	
				(0.013)	(0.007)	(0.014)	(0.014)	
Num Obs	243 387	37229	243387	243 387	243387	201 386	201386	244 453
Sample	- 10007 Full	No sources	Full	Full	Full	Full	Full	Full
Stories	All	All	All	All	All	Except 3	Except 3	All
Weights	Yes	Yes	No	Yes	No	Yes	Yes	Yes
	100	100	110	100	110	100	100	100

*Note:* Coefficients from linear regression models. Dependent variable is story rating (true/false) in Columns 1-7 and correct response in Column 8. Standard errors clustered on respondent in parentheses. Reference categories are as follows. Media usage: neither state-run nor independent media. Age: 18-24. Columns 3 and 5 replicate Columns 1 and 4 with demographic weights. Column 2 replicates Column 1 restricting the sample to respondents who saw news stories without randomly assigned news sources. Column 6 replicates Column 4, dropping stories for which news sources were not randomly assigned (stories 1, 2, 3). Column 7 replicates Column 6, controlling for assigned sources. See text for details.

Table A22: Discernment depending on presidential approval, media usage, and story direction, Study 2

	1	2	3
(Intercept)	0.301 (0.028)***	0.325 (0.040)***	0.556 (0.013)***
Approval+Media: Critics, critical media	-0.021(0.034)	-0.030(0.034)	0.032(0.018)+
Approval+Media: Critics, state media	0.024(0.033)	0.023(0.032)	0.023(0.016)
Approval+Media: Supporters, other	0.008(0.040)	0.005(0.039)	-0.007(0.022)
Approval+Media: Supporters, critical media	0.012(0.036)	0.001(0.038)	0.004(0.024)
Approval+Media: Supporters, state media	0.029(0.033)	0.028(0.033)	-0.013(0.016)
True	0.214 (0.027)***	0.206 (0.026)***	· · · ·
Propaganda-consistent	0.027(0.030)	0.027(0.030)	0.072 (0.020)***
Propaganda-inconsistent	0.011(0.041)	0.007(0.041)	-0.046 (0.022)*
Approval+Media: Critics, critical media*True	0.056(0.035)	0.061(0.034)+	. ,
Approval+Media: Critics, state media*True	0.016(0.033)	0.013(0.032)	
Approval+Media: Supporters, other*True	-0.010(0.044)	-0.009(0.043)	
Approval+Media: Supporters, critical media*True	0.001(0.043)	0.004(0.044)	
Approval+Media: Supporters, state media*True	-0.036(0.033)	-0.035(0.033)	
Approval+Media: Critics, critical media*Propaganda-consistent	-0.057(0.039)	-0.055(0.039)	-0.035(0.026)
Approval+Media: Critics, state media*Propaganda-consistent	-0.022(0.036)	-0.022(0.036)	-0.010(0.024)
Approval+Media: Supporters, other*Propaganda-consistent	0.029(0.045)	0.037(0.045)	0.019(0.030)
Approval+Media: Supporters, critical media*Propaganda-consistent	0.070(0.043)	0.069(0.043)	-0.009(0.034)
Approval+Media: Supporters, state media*Propaganda-consistent	0.071(0.036)+	0.073 (0.037)*	0.019(0.025)
Approval+Media: Critics, critical media*Propaganda-inconsistent	0.105 (0.055)+	0.106 (0.055)+	0.131 (0.030)***
Approval+Media: Critics, state media*Propaganda-inconsistent	-0.040(0.049)	-0.044(0.049)	-0.007(0.027)
Approval+Media: Supporters, other*Propaganda-inconsistent	-0.143(0.051)**	-0.144(0.051)**	-0.043(0.035)
Approval+Media: Supporters, critical media*Propaganda-inconsistent	-0.131 (0.053)*	$-0.132(0.053)^{*}$	-0.030(0.041)
Approval+Media: Supporters, state media*Propaganda-inconsistent	$-0.127(0.050)^{*}$	$-0.126(0.050)^{*}$	-0.071(0.027)**
True*Propaganda-consistent	0.049(0.034)	0.042(0.034)	
True*Propaganda-inconsistent	-0.055(0.048)	-0.037(0.048)	
Approval+Media: Critics, critical media*True*Propaganda-consistent	-0.052(0.048)	-0.059(0.047)	
Approval+Media: Critics, state media*True*Propaganda-consistent	0.006(0.044)	0.006(0.043)	
Approval+Media: Supporters, other*True*Propaganda-consistent	0.027(0.053)	0.019(0.052)	
Approval+Media: Supporters, critical media*True*Propaganda-consistent	-0.026(0.059)	-0.029(0.058)	
Approval+Media: Supporters, state media*True*Propaganda-consistent	0.028(0.045)	0.025(0.045)	
Approval+Media: Critics, critical media*True*Propaganda-inconsistent	0.075(0.063)	0.070(0.063)	
Approval+Media: Critics, state media*True*Propaganda-inconsistent	0.016(0.055)	0.023(0.055)	
Approval+Media: Supporters, other*True*Propaganda-inconsistent	0.059(0.066)	0.066(0.065)	
Approval+Media: Supporters, critical media*True*Propaganda-inconsistent	0.058(0.070)	0.060(0.070)	
Approval+Media: Supporters, state media*True*Propaganda-inconsistent	0.010(0.058)	0.011(0.057)	
Female		$-0.042(0.008)^{***}$	
Education		0.019 (0.006)***	
Age: 25-34		-0.017(0.013)	
Age: 35-44		-0.003(0.013)	
Age: 45-54		0.011(0.013)	
Age: 55-64		-0.010(0.014)	
Age: 65+		-0.021(0.018)	
Quiz 2		-0.005(0.009)	
Num.Obs.	243 387	243387	243387

*Note:* Coefficients from linear regression models. Dependent variable is story rating (true/false) in Columns 1-2 and correct response in Column 3. Standard errors clustered on respondent in parentheses. Reference categories are as follows. Approval+Media usage: critics that use neither state nor independent media. Age: 18-24. Demographic weights applied.