How Propaganda Works: Political Biases and News Credibility in Autocracies

By

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To Elena, Masha, and Liza

Abstract

How does authoritarian propaganda work? Existing research mostly assumes that citizens are skeptical about propaganda, and governments should use various persuasion techniques to counteract this skepticism. However, this argument is at odds with the research in political communication that finds that the persuasion capabilities of media messages are limited. It also contradicts the recent empirical evidence on autocracies, which suggests that often, state-controlled propaganda outlets are popular and trusted. I develop a theory of affirmation propaganda that allows me to explain why and under what conditions citizens trust the narratives of state-run media. A key insight from the theory is that when the autocrat has a strong base of support, and the opposition is politically distant, an effective use of propaganda is to maintain the pro-regime majority through belief affirmation rather than to win new supporters through persuasion. By sending belief-affirming messages, governments not only reinforce their connection with supporters but also convey to the latter that propaganda outlets are on their side and are thus trustworthy.

I test this argument using cross-national survey data and three original surveys in Russia. I show that media trust is on average higher in non-democracies despite extensive media manipulation in these regimes. Moreover, citizens who support ruling parties find the media more trustworthy, and this relationship is much stronger in autocracies than in democracies. In randomized experiments and surveys in Russia, I demonstrate the two key implications of the theory of affirmation propaganda: First, pro-regime Russians

are substantially more likely to believe propaganda messages but to reject propaganda-inconsistent messages; and second, many pro-regime Russians find state-run media accurate and trust such propaganda outlets more than independent news organizations. Moreover, regime supporters, especially consumers of state media, are highly vulnerable to the Kremlin's disinformation.

This dissertation contributes to the research on authoritarian regime support, the limits of information manipulation in autocracies, and susceptibility to misinformation. In the conclusion, I discuss the implications of this analysis for propaganda and regime support in Putin's Russia and other contemporary autocracies.

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1 Introduction

Authoritarian leaders across the world use propaganda and disinformation to acquire and consolidate power. Governments in China, Russia, Venezuela, Hungary, and many other countries try to shape public opinion through an extensive apparatus of television, print, and online media, overwhelming the public with their own, very distorted version of reality. Despite substantial research on autocracies, social scientists still debate how exactly propaganda works and how citizens respond to it.

Some scholars raise serious doubts about propaganda's ability to convince citizens. They point out that citizens learn to be skeptical about official narratives and the messages of state media, which are often too improbable to take at face value (Mickiewicz 2008; Huang and Yeh 2017). Then, instead of trying to convince skeptical citizens, autocrats use propaganda to project their power and intimidate the opposition (Huang 2015b; Wedeen 1999), to induce attitude falsification (Little 2017), or to confuse and distract citizens (Pearce and Kendzior 2012; King, Pan, and Roberts 2017). Thus, while propaganda may fail to persuade, it can fulfill other strategic goals.

On the other hand, a growing number of studies argue that persuasion is still possible: Autocrats can make propaganda more believable through sophisticated manipulation techniques, such as careful mixing of fact and fiction, misattributing responsibility, or fusing political messages with entertainment (Stockmann and Gallagher 2011; Gehlbach and Sonin 2014; Rozenas and Stukal 2019; Tolz and Teper 2018; Mattingly and Yao 2020).

Mastering the art of communication thus allows governments to compensate for the inherent untrustworthiness of propaganda. They can further reduce disbelief in official narratives by shutting out independent sources of information (Enikolopov, Petrova, and Zhuravskaya 2011; Müller 2013).

This dissertation offers a different perspective on how and why propaganda works. What if citizens are not as skeptical about propagandistic narratives and authoritarian state media as existing research implies? Less skepticism means that persuasion is less necessary, and that has major implications for our understanding of the mechanisms of authoritarian propaganda and authoritarian rule in general. In this dissertation project, I outline how autocrats can design their propaganda if the "persuasion constraint" is relaxed; further, I investigate the degree of skepticism about propaganda in autocracies and the specific factors that make citizens more susceptible to propagandistic messages, focusing, in particular, on how political biases shape the perceptions of media and propaganda. I examine these issues via cross-national survey data and three original surveys and experiments that I conducted in Russia, an authoritarian regime notorious for its use of propaganda.

My analysis builds on several important insights related to the perceptions of media and propaganda in autocracies. First, state-controlled media in these regimes, which are used by autocrats to spread disinformation, nevertheless remain popular. There appears to be a demand for state media even when there are independent media that offer more truthful reporting. It is also important not to exaggerate the sophistication of authoritarian propaganda: Much of its content amounts to unabashed praise of the leadership, blunt denials of government failures, or fabricated stories about regime opponents. Such content is unlikely to convince a critically-minded person. These observations are difficult to reconcile with the accounts of propaganda described above—it appears that citizens may not be especially skeptical about propaganda even when governments use rather primitive manipulation tactics. Rather, such an outcome is reminiscent of partisan information

processing usually found in more competitive political regimes, whereby citizens treat politically like-minded information more leniently but avoid or discount information not congruent with their existing views (Taber and Lodge 2006; Gaines et al. 2007; Van Bavel and Pereira 2018).

I develop a theory of affirmation propaganda that complements existing theoretical accounts of authoritarian information manipulation and allows us to explain the surprising lack of skepticism among citizens. This theory integrates recent work on autocracies with decades of research on partisanship and political communication. The starting point for this theory is that contemporary autocrats often enjoy substantial and genuine public support, and such support shifts the calculus in information manipulation. I show that if there is a sufficiently strong political connection between the leader and the supporters, and if the autocrat's support base is large enough, it is no longer necessary to persuade the regime critics (e.g., by employing various tactics mentioned above). Moreover, such persuasion efforts can be counterproductive, as some supporters may be lost as a result. Under such conditions, the regime can instead focus on affirmation propaganda, which entails continually sending belief-consistent messages to existing supporters. Supporters perceive such pro-regime messages as more plausible than critical messages produced by alternative, independent news organizations, as I show in a large-scale survey in Russia, in which participants evaluated a wide range of news stories. Thus, affirmation propaganda allows the regime to maintain a connection to its supporters.

Moreover, by sending belief-affirming messages to regime supporters, state media convey that they are on the side of citizens. This alleviates the problem of their inherent untrustworthiness and improves their credibility among regime supporters. On the contrary, the more critical, even though more objective, reporting by independent media hurts their credibility in the eyes of pro-regime citizens—such reporting goes against their political biases. These expectations are confirmed by my empirical analysis. First, using survey data on more than 100 countries, I show that support for ruling parties is associated

with higher trust in media. Then, in two randomized experiments conducted in Russia, I demonstrate that supporters of the president Vladimir Putin are more likely to believe news messages when these messages are attributed to state-run media outlets rather than independent news outlets. In another survey, I find that Putin supporters mostly believe state propaganda outlets to be accurate and uncensored, even as they admit that these media are not objective or politically independent.

Considering propaganda through the framework of politically biased news processing helps to explain why many citizens in countries such as Russia stay within the bubble of state media even when they have access to alternative sources of information, and even when state-run media turn more and more propagandistic. The emphasis on affirmation propaganda allows autocrats to continue promoting fabricated stories and shaping the news agenda for the public, as the latter lacks reasons to abandon state-run media. This has major consequences for the spread of false information. In my analysis of over 1 million decisions on the veracity of news stories, I show that Russians supportive of president Putin were highly susceptible to the Kremlin's disinformation, especially if they were regular consumers of state-run media.

A downside of affirmation propaganda is that it cannot convince opposition-minded citizens. Moreover, regime critics may be further alienated by affirmation propaganda, becoming even more skeptical about state propaganda outlets. Indeed, my analysis finds strong disagreements between opposition-minded Russians and pro-Putin citizens about the veracity of pro-regime and critical stories and about the accuracy and credibility of state-run and independent media. Thus, affirmation propaganda may exacerbate political polarization, causing both regime supporters and critics to become more entrenched in their views and perceptions of news and media. Moreover, such polarization makes it costlier for the regime to switch from affirmation propaganda to a more moderate propaganda strategy that could appeal to the opposition. In other words, the regimes that use affirmation propaganda may become locked into it, being forced to rely on this

strategy more and more.

One contribution of this research project is theorizing and empirically demonstrating an important strategy of information manipulation that helps to prop up authoritarian rule. The focus on this strategy, affirmation propaganda, helps us explain the long-term political successes of authoritarian rulers such as Vladimir Putin and their ability to maintain strong public support despite various political and economic crises.

My dissertation does not imply that other uses of propaganda—intimidation, distraction, sowing confusion, or persuasion—are meaningless or ineffective. However, this analysis suggests that having a substantial support base reduces the constraints on the extent of deception and censorship that authoritarian leaders can use, and it opens space for other strategies such as affirmation propaganda. More broadly, my analysis highlights that it is necessary to pay more attention to the scope conditions for various propaganda strategies.

Relatedly, this dissertation demonstrates that when affirmation propaganda is feasible, autocrats are much less constrained by alternative information sources. Previous work has argued that such media can provide autocrats with useful information or make citizens more content. My research suggests that when affirmation propaganda is at work, independent media are not an attractive alternative for most regime supporters, and these citizens would reject critical information reported by such media. Thus, independent journalism, long thought to be a bulwark against authoritarianism (Muratov 2021), is not enough to combat authoritarian disinformation and propaganda. Facilitating access to independent media is important, but we should not expect such efforts to incentivize regime supporters to leave the bubble of state propaganda.

At the same time, my research emphasizes that autocrats who use affirmation propaganda have to follow the beliefs and preferences of their supporters, and it may be dangerous to deviate from the core beliefs of supporters when designing propaganda efforts. This adds to our understanding of how contemporary autocrats are often con-

strained by public opinion (Rosenfeld 2018; Rozenas and Stukal 2019)—meaning, they are not all-powerful masters of persuasion. Existing research on autocracies emphasizes the strategic decisions by leaders and elites (Svolik 2012), but my research suggests that we may underestimate the role that the public plays in such regimes. While citizens in authoritarian regimes are not free and autonomous, we should pay more attention to how their beliefs and preferences influence the behavior of leaders.

My work also bolsters the understanding that political biases and "partisan" filtering are a universal and global phenomenon (Ditto et al. 2018). Moreover, my findings challenge some existing research on autocracies that portrays their citizens as sophisticated, skeptical, and discerning news consumers. I show that Russians, despite having experienced information manipulation for decades, are often wrong about the veracity of news stories, and in many cases, these errors are driven by politically biased processing. This illustrates that fighting misinformation when citizens view the media through a political lens is very challenging.

The findings of this dissertation are also relevant for more democratic regimes. First, propaganda and misinformation are on the rise globally, and politicians in democratic countries more and more often adopt propaganda tactics pioneered by autocrats. Affirmation propaganda can thus be viewed not only as a strategy of authoritarian rule but as a general communication strategy that can be effective in a variety of political settings, posing threat to the prospects of democracy.

Second, my findings prompt some reevaluation of recent claims by journalists, politicians, and some scholars about the extent to which foreign governments affect politics and public opinion in democracies. For example, Vladimir Putin has often been credited with building an extensive and effective global propaganda machine (Van Herpen 2015). However, we should carefully investigate how such propaganda works and whether it does or can actually change minds. It is tempting to explain extreme partisanship, polarization,

or conflict by the strategic efforts of cunning foreign adversaries, but we may overestimate the impact of these efforts. Foreign propaganda may appear effective simply because it tells citizens what they want to hear, or because it is amplified by powerful domestic actors. Underestimating authoritarian interference in democratic politics is dangerous, but exaggerating it and ignoring more fundamental issues within democratic polities themselves may also be harmful.

A methodological contribution of this study is a novel experimental design applicable to studies of propaganda and misinformation. While most studies on this topic examine the perceptions of news and media in a standard survey setting, one of my surveys was designed and promoted as a quiz that offered the participants to test their ability to recognize misinformation. This approach places the evaluations of news and media in a setting similar to casual online news consumption, and it creates a convincing pretext for the evaluation of a large number of news messages, maintaining sufficient interest from the participants. This study format is also designed to reduce dishonest responses that are often a concern for surveys conducted in autocracies.

Lastly, the results of this analysis are relevant to the formal theoretical work on censorship, propaganda, and Bayesian persuasion, which often assumes a uniform response to information manipulation among citizens, as well as their ability to observe the level of media bias. Incorporating the heterogeneity of political preferences and news perceptions in these models may enrich future formal work on these problems.

1.1 The Structure of the Dissertation

The dissertation is comprised of three essays that examine the perceptions of news and media in authoritarian regimes, the relationship between pro-regime attitudes and news credibility, and the consequences of politically biased news processing with respect to everyday news consumption and citizens' ability to recognize misinformation. Taken

together, these studies provide evidence that authoritarian state media often command substantial trust, and that belief affirmation can bolster the credibility of propaganda among regime supporters.

Before discussing these three empirical studies, it is worth summarizing the key observable implications of the theory of affirmation propaganda. First, autocrats are more likely to choose belief-affirming tactics over other approaches to manipulation when there exist a large pro-regime majority, an identity connection between the regime and its supporters, and a politically distant opposition. Second, citizens who have an identity connection to the regime (regime supporters) are more likely to trust propaganda messages but less likely to trust messages inconsistent with propaganda, compared to regime critics. Third, regime supporters are more likely to trust propagandistic state media and less likely to trust independent (critical) media, compared to regime critics. Fourth, when propaganda attempts to appeal to regime critics, it is less attractive to regime supporters. Fifth, affirmation propaganda tactics are more effective with respect to core regime supporters than with respect to moderate supporters.

This study focuses on testing the individual-level implications of the theory (2–5), as it seeks to establish how citizens perceive media and propaganda in authoritarian regimes. The first implication, which requires a variation in regime-level characteristics and cross-national data on propaganda strategies and messaging, can be explored in future work. In the conclusion to the dissertation, I discuss the strategies that can be seen as alternatives to affirmation propaganda, and the possible conditions for these strategies to be preferable to belief-affirming tactics.

The **first essay** investigates whether trust in media is greater in more democratic or in more authoritarian regimes. Some previous research has suggested that citizens of autocracies report higher media trust, but this research has only considered a limited subset of available cross-national data on attitudes. I use a large-scale data set from

the World Values Survey (WVS), which covers more than 100 countries in 1981–2020, to establish, first, whether media trust is indeed consistently higher in authoritarian regimes, and second, whether this difference can be explained by various country-level features or respondent-level characteristics, including support for the ruling party.

I find a robust negative relationship between the level of democracy and trust in press and television. This relationship is consistent in different subsamples of countries surveyed by the WVS. A difference exists not only between authoritarian and democratic regimes, but also between more and less restrictive autocracies and between more and less competitive democracies. A substantial difference remains even when several individual and country-level variables, including age, education, economic development, political polarization, and internet access in the country, are taken into account.

Further, the relationship between support for the ruling parties and trust in press and television is positive, and the analysis suggests that this government support partly accounts for the gap in trust between autocratic and democratic regimes. Moreover, this relationship is weak in democracies and much stronger in more authoritarian regimes, which may suggest that in autocracies, citizens are more likely to associate the media with the government or the ruling party. However, political dispositions do not fully explain the gap in trust, which remains sizable even after controlling for regime support.

An important conclusion from this analysis is that citizens in autocracies often find the media relatively trustworthy even though most media in such regimes are state-controlled and often used to spread propaganda. This result challenges the idea that citizens in authoritarian regimes are highly skeptical about media and propaganda. It also calls into question a well-established argument that trust in institutions is primarily driven by the underlying institutional quality, as state-controlled media are not independent, and they usually fail to provide objective news reporting.

These cross-national findings highlight that it is important to investigate the reasons for

trust in media in autocracies, especially with respect to trust in propagandistic state-run media. A positive relationship between ruling party support and media trust, moreover, indicates that pro-regime dispositions may be one of the reasons for such trust and that citizens who hold such dispositions are more susceptible to affirmation propaganda. This issue is investigated in detail in the next essay in the context of Russia.

The **second essay** develops a theory of affirmation propaganda and formalizes the argument, showing that for autocrats who enjoy substantial public support and face ideologically distant opposition, it may be beneficial to focus their propaganda efforts on supplying belief-consistent information. This strategy exploits the tendency of regime supporters to accept pro-regime messages more easily and to discount incongruent, critical messages. The emphasis of state media on affirmation propaganda can thus make such media appear relatively trustworthy to citizens with pro-regime dispositions. Thus, in contrast to existing work on propaganda consumption, which posits that citizens recognize the manipulative nature of state media, I argue that such skepticism is highly contingent on one's political dispositions. On the contrary, regime supporters view independent media as less trustworthy because the coverage of such media often challenges propagandistic narratives.

The empirical contribution of this essay is testing the key observable implications of the theory of affirmation propaganda, including the propensity of regime supporters to believe propaganda stories and to reject propaganda-inconsistent stories, as well as the tendency of regime supporters to find state-run media more trustworthy than independent media.

This analysis shifts the focus to a single authoritarian regime, Russia under the rule of Vladimir Putin, which is a highly appropriate case for a study of state-run media and affirmation propaganda given two of its features. First, Putin's regime has enjoyed strong public support for more than twenty, and this support was partly rooted in Putin's ability

to build an identity connection with the majority of Russians. Second, Putin's regime has extensively used propaganda and other forms of information manipulation, and there is evidence that Russian state media under Putin relied on affirmation propaganda tactics, including a heavy emphasis on anti-Western, nationalist messages, and promoting a personal cult of Putin. Moreover, Putin's Russia has become a prominent global example of an autocracy that various other authoritarian leaders sought to emulate.

I examine the data from three related studies in Russia, including a unique large-scale online experiment, in which Russian respondents attempted to guess whether news stories were true or false. As discussed above, this research design has several important features that help to reduce social desirability and to put respondents in a situation similar to real-world news consumption. The experimental manipulation was as follows: I randomly assigned respondents to view news stories attributed either to state propaganda outlets or to independent news sources.

The first key finding is that pro-Putin respondents were substantially more likely to believe propaganda messages and to reject propaganda-inconsistent messages. Second, consistent with my argument, Putin supporters were more likely to find messages credible when their source was a propaganda outlet. This result was also replicated in a survey experiment on a nationally representative sample. In another large survey on a representative online sample, most pro-Putin respondents evaluated state propaganda outlets as accurate and trustworthy, even though they recognized the pro-government bias and the lack of independence of these outlets. In contrast, only a small portion of regime supporters found less biased independent media trustworthy.

By documenting biased perceptions of media and propaganda among Russians, this study joins a growing literature on political disagreements in information processing in autocracies. My analysis shows that autocrats can boost the credibility of propaganda outlets via belief-consistent messages sent to their supporters, dissuading pro-regime

citizens from seeking alternative news sources. Thus, affirmation propaganda can be an important strategy of authoritarian rule, and under certain circumstances specified in my theory, it should be more prominent than persuasion (even though strategies based on persuasion can still be of value to autocrats).

The **third essay** builds on the second one, shifting attention to citizens' ability to recognize misinformation in an authoritarian context. Among other things, this analysis explores in what ways political biases, which serve as the basis for affirmation propaganda, can make citizens more susceptible to false information. While the research on misinformation and its detection has been growing, it rarely considers authoritarian countries, even though in such regimes citizens are frequently exposed to false information, and it is important to study their vulnerability to falsehoods.

This essay examines two questions: First, how well do citizens in an authoritarian regime identify false news stories and distinguish misinformation from real news? And second, what individual characteristics are associated with more accurate evaluations of news content? My study is the first attempt to investigate these questions systematically in an autocracy. Research on autocratic regimes has considered the spread of rumors and conspiracy theories, as well as citizens' perspectives on propaganda, but not their general capacity to detect false news and distinguish falsehoods from true news messages.

Following both the studies of authoritarian propaganda and the recent research on vulnerability to false news, I identify several individual characteristics that may be associated with a stronger or weaker propensity to detect false news, including the patterns of news consumption, sociodemographic characteristics, and political dispositions. I then examine how likely citizens that vary along these dimensions are to correctly determine whether different kinds of news messages are true or false.

This study is based on the same set of surveys in Russia that were examined in the second essay, focusing primarily on the online quiz described above. In total, I examine

more than 1 million decisions on the veracity of over 70 news stories from this quiz. To show that the patterns of responses are not driven by the features of this sample, I also analyze the results of analogous news evaluation tasks from a more conventional survey on a diverse Russian online panel.

One of the most important findings from this analysis is that the average accuracy of responses in the main survey was 51 percent—only slightly better than a random guess. The accuracy rate in the additional survey was even lower. In comparison, in two recent large studies of misinformation in the U.S. and India, the average accuracy was about 55–60 percent. Thus, again, my findings reject the argument that citizens of autocracies with substantial exposure to regime propaganda learn to be more careful and discerning news consumers. In fact, regular consumers of state media gave on average less accurate evaluations than those who used more neutral news sources or those who relied on independent, critical media.

The most important predictor of the capacity to recognize falsehoods was whether respondents were politically biased in favor of or against the news stories in question. Opposition-minded Russians, especially consumers of independent media, could often correctly recognize false propaganda stories, unlike regime supporters who were often susceptible to such stories. This result complements my findings on affirmation propaganda from the previous essay, emphasizing that autocrats can effectively spread false propaganda messages by exploiting the political biases of their supporters. Moreover, regime supporters in this analysis were also strongly averse to propaganda-inconsistent messages, even if such messages were true. This, again, highlights the challenges that independent media face in authoritarian contexts.

However, Putin supporters were not fundamentally more vulnerable to any false information: Their erroneous judgments were limited to political stories. If the supply of false propaganda stories is reduced, and pro-regime citizens find themselves in a more neutral

information environment, they would err less frequently. The problem, of course, given the previous discussion, is that it is difficult to convince pro-regime citizens to consider independent news outlets.

Finally, opposition-minded citizens were also prone to false stories consistent with their political dispositions (e.g., messages critical of the regime). This finding goes contrary to existing research on autocracies that often views regime critics as more informed and discerning news consumers. It highlights that vulnerability to misinformation is a widely shared tendency and that political filters in information processing make it very difficult to fight misinformation and propaganda.

2 Is Trust in Media Greater in Autocracies?

Authoritarian governments are notorious for the propaganda that they spread via state-run media (Walker and Orttung 2014). Controlling the media is a key goal for autocrats, as independent reporting may undermine public support for governments (Enikolopov, Petrova, and Zhuravskaya 2011) and prevent them from consolidating power. Efforts to establish control over news outlets usually result in a lopsided media environment where pro-government narratives dominate, and news organizations are tasked with promoting lies and suppressing the truth.

Given that authoritarianism is on the rise in the world, and the role of propaganda in such regimes increases (Guriev and Treisman 2019), it becomes highly important to understand how citizens perceive propaganda and propagandistic media. There is an important debate in research on autocracies with respect to how skeptical citizens of these countries are about propaganda and media.

One long-standing argument is that authoritarian propaganda is too biased to be treated seriously. Citizens understand that propagandistic media are directed and censored by governments and, consequently, that these media should not be trusted (Huang and Yeh 2017). Moreover, exposure to authoritarian propaganda may teach individuals to become more discerning and sophisticated news consumers in general, which means that they learn to treat any media with caution, always trying to parse the agenda behind news messages (Mickiewicz 2008; Wedeen 1999). This argument is also consistent with broader

work on institutional trust that links trust to institutional quality; media in authoritarian countries, which mainly serve the government instead of faithfully reporting news information, should thus not be seen as trustworthy. In other words, this argument suggests that in general, we should observe substantially lower trust in media in authoritarian regimes compared to democracies.

Other work, however, points out that state-controlled authoritarian media can be popular and trusted (Zhu 2010; H. Zhang, Zhou, and Shen 2013; Roudakova 2017), and that large groups of citizens in these countries may find state-run media attractive (Wojcieszak et al. 2018). This research suggests that citizens of authoritarian regimes may be more susceptible to manipulation than we use to think. Trust in government-controlled media may improve the stability of authoritarian rule and undermine the prospects of democratic development in autocratic countries. In terms of overall trust in media, this research implies that trust in media is not necessarily lower in more authoritarian countries.

This debate remains mostly unresolved, partly because comparative evidence on the differences in media trust between regime types is limited. Most analyses of trust in state media and authoritarian propaganda, including those mentioned above, consider only single countries. Two existing cross-national analyses of media trust suggest that in authoritarian countries, citizens on average report *greater* trust (Müller 2013; Tsfati and Ariely 2014), which goes contrary to the earlier expectation of broad media skepticism in autocracies. However, these conclusions were based on limited cross-national data (a single wave of the World Values Survey study). Further, even if citizens indeed exhibit greater trust in media in authoritarian regimes, it is important to attempt to understand whether this difference results from certain political characteristics of these regimes or from other, non-political features of these countries or their populations.

My analysis contributes to existing research on media trust in democracies and autocracies in three ways. First, I use extensive data on trust in media from the seven waves

of the World Values Survey (WVS),[1] conducted in 1981–2020, to establish whether there is indeed a consistent negative relationship between democracy and media trust. Previous research, as noted above, has used only one wave of the WVS data. This setup also allows me to use country fixed effects, accounting for time-invariant country-level features and examining how within-country changes in the level of democracy are related to changes in media trust. Second, whereas the previous studies have only tested for the general correlation between democracy and trust in media, I examine whether this relationship holds after accounting for a range of important individual-level or country-level characteristics that can be the drivers of media trust and whether the relationship is consistent across the spectrum of political regimes (more and less open or competitive democracies and autocracies). Third, I consider how media trust is related to individual-level support for ruling parties, whereas previous research only considered the relationship between media trust and other forms of institutional trust.

I find that citizens in more authoritarian regimes indeed report higher trust in press and television, and this relationship holds in almost all of the waves of the World Values Survey. Moreover, the substantial difference remains even when several individual and country-level variables, including age, education, support for ruling parties, economic development, and political polarization, are taken into account.

I discuss several possible explanations for this gap in media trust, which include a greater coherence of media narratives in more closed regimes and the impact of democratization. However, my analysis suggests that the result is unlikely to be explained by a single political factor; it is likely a consequence of a constellation of such factors.

My study contributes to research on the determinants of trust in media (Tsfati and Ariely 2014; Kalogeropoulos et al. 2019) and on the role of media and propaganda in authoritarian regimes (Gehlbach 2010; Gehlbach and Sonin 2014; Walker and Orttung 2014; Yanagizawa-Drott 2014; Bleck and Michelitch 2017; Repnikova 2017; Rozenas and

[1] Here, I rely on a combined data set of the WVS and the related European Values Survey (EVS).

Stukal 2019; Guriev and Treisman 2020b). The results of this analysis challenge the idea that citizens in authoritarian regimes are highly skeptical about media and propaganda (Mickiewicz 2008; Wedeen 1999). Instead, the analysis suggests that citizens in autocracies may find the media relatively trustworthy, even though the state often controls these media and uses them to spread authoritarian propaganda. Thus, citizens may be much more vulnerable to state propaganda and political manipulation than we used to think.

More broadly, if citizens can trust the inherently untrustworthy authoritarian media, it is worth reconsidering our understanding of what drives trust in institutions. My findings question the argument that trust in institutions is primarily driven by the underlying institutional quality (Newton 2007), and this calls for further research on the topic.

2.1 Trust in Media in Democracies and Autocracies: What Can Explain the Difference?

Trust in media can be viewed as a type of institutional trust, which implies a belief that an institution—the media, in this case—reliably performs its key functions (McKnight and Chervany 2001; Simpson 2007). If one trusts the media, this individual expects the media to provide reasonably accurate information and that journalists do not try to take advantage of citizens. Consistent with this view, extensive research suggests that political and social institutions are more trusted when institutions are dependable (Newton 2007), and trust declines when institutions work poorly or inconsistently (Mishler and Rose 2001), failing to provide public goods. In autocracies, the media clearly cannot perform their main role of informing the public, as many mainstream news outlets in such regimes are directly or indirectly controlled by governments, and the quality of reporting and journalistic independence are sacrificed for the political goal of promoting pro-regime narratives. Given these institutional limitations on journalism, we should expect to see much less trust in media in authoritarian regimes.

And yet, there is mounting evidence that many citizens in autocracies continue to consume news from state media, and that they often list such state-run media among the most trustworthy news sources (H. Zhang, Zhou, and Shen 2013; FOM 2019; Levada Center 2020). Moreover, some cross-national analyses, albeit being based on limited data, indicate that citizens of more authoritarian regimes may be reporting greater overall trust in media (Tsfati and Ariely 2014; Müller 2013). How can this trust in untrustworthy media be explained?

One explanation, suggested by Müller (2013), points out that authoritarian media present less diverse views and opinions, focusing on the same messages that the government wants them to promote; because of such "unified" messaging, the media may appear relatively coherent and reliable. Müller also suggests that the public in autocracies may be more receptive to hegemonic narratives dictated from above—citizens themselves may be more averse to pluralism in such polities. This latter suggestion is difficult to substantiate, but the argument about narrative coherence is in line with research in political communication, which finds that the repetition of news messages makes them more believable (Foster et al. 2012), and that media credibility depends on whether their stories can be verified using other sources (Flanagin and Metzger 2007). Roudakova (2017) in her study of news consumption in Russia argues that citizens have become more cynical about the media after the collapse of communism, when a plethora of new media organizations emerged—although in this case, a more negative attitude may be a result of commercialization, not of the exposure to a wider range of worldviews.

Another perspective is that trust in media in authoritarian and democratic regimes is driven essentially by the same set of factors, and then, if trust is greater in autocracies, it is because of a particular configuration of these factors in non-democratic regimes. Some work, e.g., Tsfati and Ariely (2014), investigates the cross-national correlates of trust in media under this assumption. It follows then that conditional on these important drivers of media trust, there would no longer be a difference between democracies and autocracies.

What would such important factors be?

As for individual predictors of media trust, Tsfati and Ariely (2014) find that education is negatively associated with trust in media, possibly because educated citizens are more sophisticated and skeptical media consumers. On the other hand, they find a positive correlation between media trust and age. If populations of authoritarian countries tend to be older and less educated, this might explain higher media trust in such regimes. Another possible predictor is generalized trust: If one is a generally more trusting person, one might also be more likely to trust the media (as well as other institutions). Theoretically, we might imagine that citizens in more authoritarian societies are somehow more trusting in general.[2]

One factor that existing research of cross-national determinants of media trust does not consider is whether an individual is a supporter of the current government or the ruling party. Citizens who sympathize with the government or share an identity connection with the leader may perceive media narratives more positively and thus find the media themselves more trustworthy because of a deeper underlying trust in the political system, which should be higher when one's preferred political group or party is in power.

In democratic countries, however, the relationship between being a government supporter and trusting the media should be weaker because governments change, and the media, depending on their political leanings, may be associated with the ruling party or with its opponents (if the media lean toward party A, and party B is in power, supporters of party B would trust the media less than supporters of party A). In other words, the relationship between supporting the government and trusting the media should be weak at best in democracies where the media are not, in general, tied to the regime.

In authoritarian countries, on the other hand, the media are controlled by the gov-

[2]Tsfati and Ariely (2014) also consider several variables from the WVS that capture media consumption, but these characteristics are so closely intertwined with media trust that it would be impossible to distinguish causes from outcomes. I do not consider such variables in this analysis.

ernment and sometimes essentially fused with the state. As a result, there should be a stronger relationship between supporting the government and trusting the media, as the latter are more likely to be seen as part of the former, especially if political turnover is infrequent, as is often the case in non-democracies. Thus, substantial trust in media in an autocracy may be explained by sizable public support for an autocrat given the stronger connection between these two factors.[3]

Trust in media may also be driven by certain country-level factors. Tsfati and Ariely (2014) consider economic development, which, as they note, can improve the quality of institutions and citizens' perceptions of social and institutional stability. Although it is unlikely that higher trust in media in autocracies is explained by stronger economic development, it is still worth accounting for this factor because there may be other, less obvious pathways from the state of the economy to media trust (for example, in wealthier societies, citizens may possess more resources or free time to access a variety of diverse opinions, which could increase their skepticism about media in general).

Another factor that existing research (Tsfati and Ariely 2014; Kalogeropoulos et al. 2019) highlights is the availability of alternative news sources online. Internet and social media usage has been often associated with lower trust in newspapers or television. Understanding this, autocrats may deliberately impede the spread of the internet prevent citizens from gaining access to alternative news sources and questioning the mainstream media narratives. It is worth checking whether autocracies are still distinct from democracies in terms of media trust after controlling for the spread of the internet.

One other variable of interest is uncertainty. Research suggests that economic instability reduces trust in institutions (Albertson and Gadarian 2015). Work on former

[3]It is important to be mindful of the possibility that regime support is driven by trust in authoritarian media, which makes citizens susceptible to propaganda narratives. However, we should not overestimate the extent to which media exposure can affect political dispositions. Consumption of political media can reinforce existing beliefs (Stroud 2010; Prior 2013), but usually, the propensity to consume such political or partisan media is itself driven by pre-existing political sympathies. An extensive literature in political communication suggests that usually, media messages can change citizens' beliefs only on the margins (Taber and Lodge 2006; DellaVigna and Kaplan 2007).

communist countries also often argues that low political trust in the post-communist world is a consequence of poor and inconsistent institutional performance in the transition period (Mishler and Rose 2001; Epperly 2019). It is thus important to account for economic uncertainty and political stability when ascertaining whether citizens trust the media more in non-democracies.[4]

Recent research has also highlighted another possible explanation for low trust in media in some democratic societies: mass political polarization (Ladd 2012; Van Duyn and Collier 2018; Finkel et al. 2020). Democratic societies may exhibit lower trust in media because they are becoming more polarized. At the same time, there is no evidence that polarization is a purely democratic phenomenon. In fact, polarization has recently been on the rise in authoritarian regimes as well (Laebens and Öztürk 2020). In either case, it is worth testing whether polarization contributes to the difference in trust in media between more democratic and more authoritarian societies.

2.2 Data

The outcome variables in this analysis are responses to questions about confidence in press and confidence in television in the World Values Survey and the European Values Survey (Haerpfer et al. 2021; EVS 2021). The question was as follows: "I am going to name a number of organizations. For each one, could you tell me how much confidence you have in them: Is it a great deal of confidence, quite a lot of confidence, not very much confidence or none at all?" Television and press were among the institutions listed in this question. I recoded the data so that 4 means a great deal of confidence, and 1 means none at all.

[4]This discussion does not consider the more specific institutional features of media environments, such as the variety of viewpoints presented in the media, because these features are already largely incorporated into the measurement of democracy, and indicators capturing these media characteristics are in practice very strongly correlated with democracy indices.

I use all seven waves of the WVS/EVS available today, conducted in 1981–2020. With respect to trust in press, after removing countries and territories for which measures of democracy are not (yet) available, the sample amounts to 555,040 observations in 385 surveys (country-years) covering 107 countries in different periods. The question on trust in television was added in the 1990s, so the sample in this case is smaller: 359,039 observations in 248 surveys with non-missing trust in TV, covering 98 countries. The sample is further reduced when individual-level or country-level covariates are added.

The measure of democracy is taken from the V-Dem Project (Coppedge et al. 2022): The Electoral Democracy index, a variable scaled to take values between 0 (fully closed autocracy) and 1 (liberal democracy). The index is based on a variety of institutional characteristics that include free and fair multiparty elections, guaranteed personal liberties, rule of law, certain constraints on the executive, etc. The V-Dem index of democracy is a principled measure of democracy that represents an expert consensus on regime characteristics. It is especially appropriate for this analysis because it is a continuous measure that captures even small changes in the levels of democracy, and it can be used in regressions with country fixed effects (see a description of my empirical strategy below), which is often impossible with binary or categorical measures of democracy.

Individual covariates are taken from the WVS/EVS data set. These include age, gender, level of education (8-point scale from incomplete elementary to tertiary education), generalized trust, and support for the ruling party. Generalized trust is based on the following question: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?" The response "Most people can be trusted" is coded as 1, the response "Need to be very careful" is coded as 0, and the response "Don't know" is coded as 0.5 (most respondents chose one of the first two responses).

Support for the ruling party is measured using the following question: "If there were a national election tomorrow, for which party on this list would you vote?" In addition, if

the respondent answered "Don't know," an additional question was asked: "Which party appeals to you most?" Respondents were offered a list of current political parties and were encouraged to pick one. Based on these responses, I constructed a dichotomous variable that takes the value of 1 if a party that the respondent selected was the ruling party or a member of the ruling coalition at the moment of the survey, and 0 otherwise.[5] To determine the ruling parties for each country-year, I consulted the Database of Political Institutions (Cruz, Keefer, and Scartascini 2021) and other sources. This question was only asked in selected WVS/EVS surveys, and it was inapplicable in countries without multiparty elections. As a result of these limitations, the variable was present in 284 country-years with non-missing trust in press ($n = 358{,}637$) and in 178 country-years with non-missing trust in television ($n = 240{,}253$).

Country-level variables were primarily taken from the World Development Indicators maintained by the World Bank ("World Development Indicators," n.d.). GDP per capita and the share of urban population represent economic development, the share of internet users in the population captures internet access, inflation and unemployment represent economic uncertainty and instability. I also control for population to account for the potential size of the media market and the infrastructure necessary for the distribution of media content. Political (in)stability is measured as the age of the current regime in years, as calculated by the Polity Project (Marshall, Gurr, and Jaggers 2016). Finally, to account for political polarization, I use an indicator from the V-Dem Project that measures the degree of antagonism between the main political camps in each country; larger values correspond to greater antagonism.

[5] Responses were considered missing if respondents did not answer the question or were ineligible to vote.

2.3 Analysis Strategy

I regress trust in press and television on the democracy index, controlling for various country-level and individual characteristics. If after adding a particular set of covariates, the difference in media trust between more authoritarian and more democratic regimes disappears, the difference is then explained by these other variables, not by regime type. I use linear regression of the following form:

$$T_{ict} = \alpha + \beta DEM_{ct} + \gamma X_{ict} + \delta_c + \phi_t + \epsilon_{ict},$$

where T_{ict} is trust in press or television, DEM_{ic} is the Electoral Democracy index in a given country-year, X_{ict} is a matrix of individual-level and/or country-level controls, δ_c are country fixed effects, and ϕ_t are year fixed effects (i indexes individuals, c countries, and t years). Heteroskedasticity-robust standard errors are clustered on country, and the regressions utilize individual weights provided in the WVS to correct for sampling biases and to increase within-country representativeness.

Employing country fixed effects means that my analysis accounts for time-invariant country characteristics, and thus, it allows us to see how changes in democracy levels over time correspond to changes in media trust within countries.

2.4 Findings: Trust in Media Is Greater in More Authoritarian Regimes

The baseline comparison of media trust in more and less democratic regimes, using all seven waves of the WVS/EVS data, shows that citizens indeed report greater trust in press and television when the regimes are less democratic. Tables 2.1 and 2.2 report the regression coefficients, where "Democracy" is the V-Dem Electoral Democracy index. The coefficients in the tables indicate that a change in the Electoral Democracy index from 0 to 1—that is, from a fully closed autocracy to a fully liberal democracy—is associated with a 0.4–0.5 decrease in trust in press or television. Given that these outcome variables are

on a scale from 1 to 4, this is a sizable difference, which corresponds to about 0.5–0.6 of a standard deviation in confidence in press or television in the full WVS sample.

Table 2.1: Trust in press in democracies and autocracies, with individual controls

	1	2	3	4	5
Democracy	−0.386*	−0.361**	−0.431***	−0.392***	−0.314***
	(0.155)	(0.109)	(0.090)	(0.087)	(0.083)
Age		0.001***	0.001***	0.001***	0.001***
		(0.000)	(0.000)	(0.000)	(0.000)
Female		0.003	0.001	0.001	0.001
		(0.006)	(0.008)	(0.008)	(0.008)
Education		−0.005*	−0.003	−0.003	−0.003
		(0.002)	(0.002)	(0.002)	(0.002)
Generalized trust		0.136***	0.137***	0.136***	0.136***
		(0.009)	(0.011)	(0.011)	(0.011)
Supporter				0.083***	0.213***
				(0.015)	(0.048)
Democracy*Supporter					−0.199**
					(0.066)
Num.Obs.	587 642	476 730	301 933	301 933	301 933

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

Note: Coefficients from linear regression models. Standard errors clustered on country in parentheses. Individual weights from the WVS. Country and year fixed effects included. In Columns 3, 4, and 5, sample is restricted to observations with non-missing data on ruling party support.

To make this comparison more concrete, consider an example. In 2017, the Electoral Democracy index was 0.270 for Russia and 0.889 for Australia. Given this difference in the level of democracy, the baseline model would predict that in 2017, trust in press in an authoritarian regime like Russia would be about 0.24 points greater than in a much more democratic country like Australia. This difference amounts to about 0.3 of the standard deviation in trust in press in the whole WVS sample. If we look at the actual numbers of trust in media in the WVS data, the average trust in press in Russia in 2017 was 2.31, and it was about 2.0 in Australia in 2018. The resulting difference is similar to the predicted one: about 0.31 points on a scale of 1 to 4, or about 0.37 of the sample standard deviation.[6]

[6] Of course, in other cases, the actual values of media trust may not correspond to this pattern.

Table 2.2: Trust in television in democracies and autocracies, with individual controls

	1	2	3	4	5
Democracy	−0.534**	−0.549**	−0.610**	−0.498*	−0.430*
	(0.193)	(0.184)	(0.201)	(0.208)	(0.201)
Age		0.001*	0.001*	0.001*	0.001*
		(0.000)	(0.000)	(0.000)	(0.000)
Female		0.035***	0.033***	0.034***	0.033***
		(0.008)	(0.008)	(0.008)	(0.008)
Education		−0.025***	−0.022***	−0.021***	−0.021***
		(0.003)	(0.002)	(0.002)	(0.002)
Generalized trust		0.102***	0.095***	0.093***	0.094***
		(0.010)	(0.011)	(0.011)	(0.011)
Supporter				0.119***	0.221***
				(0.016)	(0.031)
Democracy*Supporter					−0.164***
					(0.046)
Num.Obs.	363 492	330 983	218 756	218 756	218 756

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

Note: Coefficients from linear regression models. Standard errors clustered on country in parentheses. Individual weights from the WVS. Country and year fixed effects included. In Columns 3, 4, and 5, sample is restricted to observations with non-missing data on ruling party support.

Column 2 in both tables shows that the coefficient on democracy is almost unchanged when the models control for age, gender, education, and generalized trust (although, as expected, people who are more trusting in general also trust the media more, and more educated citizens were more skeptical about television). Thus, even if populations in autocracies are distinct in terms of these individual characteristics, such differences do not account for higher trust in media in less democratic countries.

The results are also consistent across different waves of the WVS and EVS surveys. In Table A1 in the appendix, democracy is interacted with survey wave dummies. Even though the set of democracies and the set of autocracies varies substantially across survey waves, citizens of democratic countries report lower trust regardless of the wave (one exception may be wave 3, fielded in 1995–1998, where the difference is close to zero).

Ruling party support, on the other hand, may contribute to higher trust in non-democracies, as Columns 3 and 4 in the two tables show. Column 3 reports the same model as in Column 2, which is now to the sample with non-missing ruling party support. In this sample, the difference between more and less democratic countries is more pronounced, and the coefficient magnitude is larger. After controlling for ruling party support, however, the coefficient on democracy is somewhat reduced (Column 4), and there is a clear positive relationship between support for the government and media trust.

Moreover, the positive relationship between ruling party support and trust in media is much stronger in non-democratic countries. In Column 5, I report a model that interacts democracy with ruling party support. The coefficient on "Ruling party supporter" in this model indicates the positive correlation between ruling party support and media trust in non-democracies, but the negative interaction coefficient suggests that this relationship is substantially attenuated in more democratic countries.

This stronger relationship between support for the ruling party and the perceptions of media may be one of the reasons for higher media trust in authoritarian countries.[7] However, political dispositions and electoral preferences are clearly not the only or even the main reason for the difference—even after controlling for regime support, more democratic countries have substantially lower trust in media.

Table 2.3 reports the coefficients for analogous regression models with country-level controls. Note that the sample is reduced because of the inclusion of these covariates;[8] for comparison purposes, Columns 1 and 4 replicate the models with individual controls on this new sample.

After the inclusion of country-level controls, the gap between autocracies and democracies is somewhat larger with respect to trust in press (Column 2) and about the same

[7] As noted above, there may be a feedback loop between trust in media and support for the government, but trust in media cannot create support where there is none.

[8] In particular, including unemployment forces us to drop the data from the early 1980s, and a number of other variables were available only through 2018 or 2019 at the moment the analysis was conducted.

Table 2.3: Trust in press/television in democracies and autocracies, with country-level controls

	Press	Press	Press	TV	TV	TV
Democracy	−0.342*	−0.507**	−0.599**	−0.505*	−0.479*	−0.548*
	(0.145)	(0.175)	(0.201)	(0.220)	(0.193)	(0.221)
Age	0.002***	0.002***	0.002***	0.001+	0.001*	0.001+
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.000	0.000	0.003	0.034***	0.034***	0.034***
	(0.007)	(0.007)	(0.008)	(0.008)	(0.008)	(0.009)
Education	−0.005*	−0.004	−0.002	−0.024***	−0.023***	−0.021***
	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)
Generalized trust	0.144***	0.142***	0.137***	0.100***	0.100***	0.090***
	(0.011)	(0.010)	(0.013)	(0.011)	(0.010)	(0.011)
GDP per capita		0.000*	0.000**		0.000	0.000*
		(0.000)	(0.000)		(0.000)	(0.000)
Urban population		0.011+	0.010		0.012+	0.010
		(0.006)	(0.007)		(0.007)	(0.008)
Internet users		0.000	−0.001		−0.001	−0.002
		(0.001)	(0.001)		(0.001)	(0.001)
Unemployment		0.005	0.001		0.002	−0.002
		(0.004)	(0.005)		(0.005)	(0.007)
Inflation		0.000**	0.000**		0.000	0.000
		(0.000)	(0.000)		(0.000)	(0.000)
Regime age		0.005	0.007+		0.001	0.003
		(0.004)	(0.004)		(0.003)	(0.004)
Polarization		−0.034+	−0.008		0.005	0.027
		(0.020)	(0.025)		(0.021)	(0.021)
Population		0.000*	0.000		0.000**	0.000
		(0.000)	(0.000)		(0.000)	(0.000)
Supporter			0.084***			0.118***
			(0.016)			(0.017)
Num.Obs.	339 527	339 291	227 158	296 805	296 569	197 764

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

Note: Coefficients from linear regression models. Standard errors clustered on country in parentheses. Individual weights from the WVS. Country and year fixed effects included. In Columns 1 and 4, sample is restricted to observations with non-missing data on the set of country-level controls (the same sample as in Columns 2 and 5).

with respect to trust in television (Column 5). Moreover, after controlling for ruling party support (Columns 3 and 6), the coefficients on democracy are still negative and larger in

magnitude (as discussed above with respect to support for the ruling party, the magnitude change is a consequence of using a different sample). Thus, even if variables such as political polarization, political instability, or economic uncertainty undermine media trust under some circumstances, they cannot explain the main result established in this analysis.

2.5 Discussion: Is the Gap Driven By Something Other Than Regime Type?

My analysis has shown that more democratic countries are consistently behind authoritarian regimes in terms of media trust. It is unlikely that this difference is an artifact of the sample of countries in the analysis, as the gap consistently emerges in very different samples of WVS countries and across different periods. Rather, this appears to be a systematic difference between more and less democratic regimes.

While the analysis above has accounted for a variety of individual-level and country-level variables that could be related to media trust, there still could be another factor that explains the gap between autocracies and democracies. And one possibility is that there is, in fact, no such gap and that the observed difference is a consequence of sensitivity bias (Blair, Coppock, and Moor 2020), whereby respondents in autocracies would exaggerate their degree of media trust out of fear or conformism. If so, there would be no gap in reality if respondents were more honest in their answers. While such attitude falsification is often a problem for survey research in autocracies, here are some reasons to think that it is not the key problem in this case.

First, questions about trust in media do not ask individuals to reveal their level of regime support or even their attitudes toward state propaganda vehicles. These are general questions about press or television, and in most regimes, except maybe for the most closed and repressive ones, the answers would not necessarily refer to state-controlled media.

Further, a simple test of sensitivity is to check the incidence of non-response: More people should skip questions or decline to answer in settings where these questions are more sensitive. Table 2.4 reports the percent of missing responses depending on the level of democracy, as measured by the V-Dem Electoral Democracy index (larger numbers mean more democratic regimes). There is no clear pattern in terms of non-response for more democratic and less democratic countries: While the non-response rate is slightly higher in the most authoritarian regimes with respect to trust in press, it is lower in these regimes than in more democratic countries with respect to trust in television.

Table 2.4: Percent of missing responses, by the level of democracy

Democracy level	Trust in press	Trust in TV
0-0.2	2.56	1.50
0.2-0.4	1.97	2.77
0.4-0.6	1.03	0.30
0.6-0.8	1.35	3.00
0.8-1	1.51	1.13

Note: The percent of observations (respondents) with missing trust in press or television, depending on the Electoral Democracy index by the V-Dem Project. The sample is restricted to surveys (country-years) where questions about trust in press or television were asked.

Figure 2.1 shows average trust in press and television in each survey (country-year) depending on the V-Dem Electoral Democracy index. While trust tends to be quite high in some of the most autocratic countries, the gap between more and less democratic regimes exists at higher levels of democracy as well. In particular, trust is lower on average in countries with the highest level of democracy compared to other democracies. While it might be reasonable to think that citizens could be afraid to report actual trust in strongly repressive regimes, it is unlikely that the same fear exists in generally democratic societies.

In addition, it is worth remembering that in the analysis above, the coefficient on democracy remained negative or became larger in magnitude when the regressions were restricted to observations with non-missing ruling party support— that is, when the models

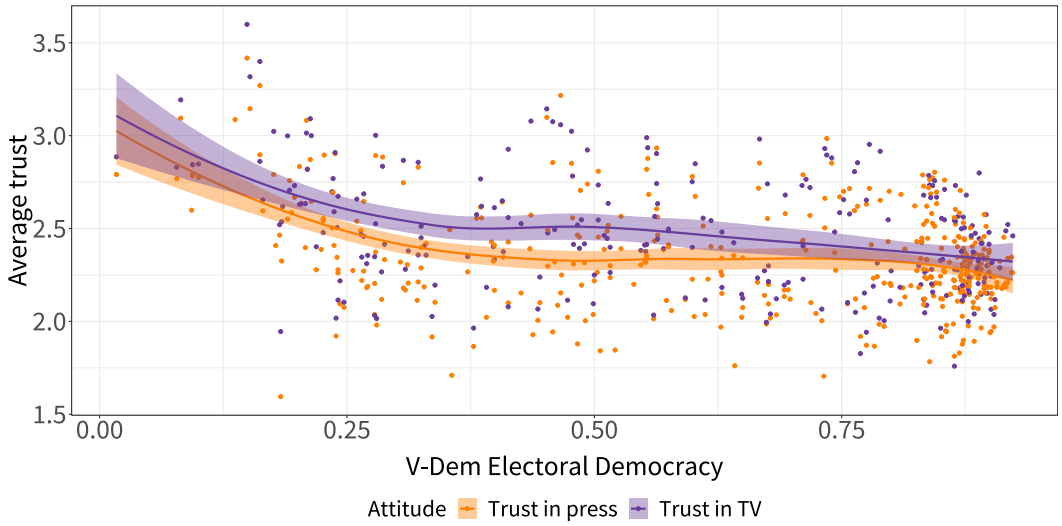

Figure 2.1: Average trust in press and television by survey (country-year) depending on the level of democracy (V-Dem Electoral Democracy index). Local regression curves are overlaid.

dropped closed authoritarian regimes without multiparty elections. To verify this directly, Table A2 in the appendix replicates Table 2.3, excluding regimes that scored lower than 0.2 on the V-Dem Electoral Democracy index. (In that case, the few very authoritarian countries with high levels of media trust, shown on the left in Figure 2.1, are dropped.) Despite that change in the sample, the main result—higher trust in autocracies—is reproduced again.

Direct tests of attitude falsification are, of course, impossible using the WVS data, and so we cannot completely reject the possibility that citizens in more authoritarian regimes do inflate their trust in media. However, as the discussion above suggests, such overreporting of trust cannot be the only explanation for the patterns observed in the data.

It is also possible that the gap in media trust between autocracies and democracies is real, but it is a consequence of some other factor that only coincides with regime type but does not follow from regime type per se. One such factor worth considering is political transformation, which often increases uncertainty and undermines the reliability of institutions. For example, as noted above, some scholarship explains low institutional trust in

the former communist countries by the difficulties of the post-communist transition (Mishler and Rose 2001; Epperly 2019). Similar institutional disruption and chaos may emerge in other cases when authoritarian regimes break down. Then, the reason for lower media trust in democracies could be that many of these countries are post-communist regimes or other post-authoritarian regimes that have recently experienced major institutional transformations.

My analysis has controlled for several important indicators of economic and regime stability, and country and year fixed effects should account for the unique experience of the post-communist nations and other groups of transitioning countries, but it might be needed to account for the depth and the breadth of the democratic transformation more directly to rule out this possibility completely. Future research may consider this using a different study design. In particular, it is important to explore whether decreases in media trust temporally follow regime breakdowns. (It could be, on the contrary, that regime breakdowns are caused by declining media trust.)

It is nonetheless worth noting that the "regime transformation" explanation applies only to cases of former autocratic regimes becoming democracies. This factor is unlikely to explain the difference between more and less democratic countries *among democracies* that was highlighted in the previous discussion.

2.6 Discussion: Possible Mechanisms

The gap in media trust between autocracies and democracies could be driven by substantive differences in the nature and organization of these regimes—that is, by specific features of democracies or autocracies. In this section, I discuss two such possible mechanisms.

First, as mentioned above, some researchers suggest (Müller 2013) that authoritarian regimes may enjoy an advantage in terms of media trust because their media environments are more coherent—the media present a more unified message because most news outlets

are to some extent controlled by governments. This might explain quite high levels of media trust in some closed, hegemonic autocracies where governments exert comprehensive control over media and systematically guide news coverage. However, this does not explain the differences among more democratic regimes shown in Figure 2.1. It is unlikely, for example, that in the most democratic societies, the media present more divided and fragmented narratives than in other democracies. (The models above have also controlled for political polarization, which may lead respondents to perceive media narratives in a more divided way.)

Another mechanism that may explain the gap is that trust in media in authoritarian regimes is driven by the peculiar relationship between pro-government political dispositions and the perceptions of media, which was highlighted above. As I have noted, trust in media in autocracies is more strongly related to regime support than in more democratic countries because of the fusion of political and media institutions in autocracies. In autocracies where exists substantial and widespread regime support, most citizens may find the media generally trustworthy, and this phenomenon may drive the overall relationship between democracy and media trust. The analysis so far has only established a general cross-country correlation between ruling party support and media trust; we need to investigate the connection between pro-regime dispositions and perceptions of media in authoritarian countries more thoroughly. I will explore this relationship in the subsequent chapters.

2.7 Conclusion

This analysis has shown that citizens in non-democracies, despite government control over media, propaganda campaigns, and censorship, often report substantial trust in media. Not all autocracies exhibit this pattern, but on average, citizens in more authoritarian regimes trust the media more. This finding is robust to different samples and different

model specifications. My analysis suggests that variables such as the state of the economy are unlikely to account for the difference between democratic and authoritarian regimes. Rather, this gap is probably better explained by political factors. The difference between more and less democratic regimes, however, may be consistent with multiple political explanations. Future research may investigate these possibilities, including the role of regime transitions and the coherence of media narratives, more directly. It is also important to probe other factors that may contribute to the gap that I established, as the set of variables explored in this analysis is not exhaustive.

But even if the overall gap between autocracies and democracies can be explained away by accounting for some additional variables, it is crucial to study why citizens would be willing to trust fundamentally untrustworthy media in specific authoritarian regimes, as such trust may contribute to the successes of authoritarian propaganda. This analysis has suggested that pro-regime and pro-government dispositions may play a role in such trust. We need to investigate the role of such dispositions and other mechanisms that create or support trust in state-controlled media in autocracies, as well as how autocrats can exploit this trust to manipulate the public. The next two chapters examine these questions in the context of Russia, focusing, among other things, on the relationship between regime support and the perceptions of news and media.

3 How Autocrats Maintain Pro-Regime Majorities Through Belief Affirmation

Recent scholarship highlights an increasingly important strategy that autocrats use to survive in power: information manipulation (King, Pan, and Roberts 2017; Roberts 2018; Sanovich, Stukal, and Tucker 2018). Many authoritarian leaders, such as Russia's Vladimir Putin, have made propaganda and censorship a cornerstone of their rule (Guriev and Treisman 2019), manipulating the public via state-run media (Gehlbach 2010; Walker and Orttung 2014; Rozenas and Stukal 2019). Hence, a key puzzle in the research on authoritarian information manipulation is how autocrats can persuade citizens (Yanagizawa-Drott 2014; Bleck and Michelitch 2017) if the latter are supposed to be skeptical about propaganda and censorship (Wedeen 1999; Koch 2013). One answer given by existing research is that autocrats employ a variety of cleverly designed strategies to make propaganda more convincing (Stockmann and Gallagher 2011; Gehlbach and Sonin 2014; Rozenas and Stukal 2019; Gehlbach 2010; Tolz and Teper 2018).

However, existing work may overestimate the importance of persuasion in the authoritarian context. Research in political communication suggests that, usually, it is difficult to make citizens change or correct their views (Taber and Lodge 2006; Bullock et al. 2015; Nyhan and Reifler 2010), so media can affect individuals' beliefs only marginally (DellaVigna and Kaplan 2007). It is unclear why authoritarian propagandists would persuade more successfully than do media elsewhere.

The emphasis on elaborate manipulation strategies also clouds the fact that much of authoritarian propaganda is not subtle or sophisticated. Often, it amounts to blunt pro-regime messages (Huang 2018) and outrageous lies. For example, during Russia's invasion of Ukraine, the Kremlin's propaganda absurdly maintained that Ukraine was governed by drug-addicted Nazis, and it attributed the Russian army's brutalities to Ukrainians themselves (Faiola 2022). Astonishingly, many citizens appeared to believe these ludicrous statements, and some even rejected the personal testimonies of their Ukrainian family members (Hopkins 2022). Why did Russians, an educated nation with extensive experience in parsing propaganda, not question the Kremlin's falsehoods?

In this study, I present a different explanation of how authoritarian propaganda works. Many autocrats today enjoy substantial, genuine public support, and their foremost concern is *maintaining existing supporters* rather than convincing skeptical citizens. Building on this insight, I develop a theory of "affirmation propaganda," a strategy of information manipulation targeting pro-regime citizens with belief-affirming messages. Such belief-consistent news reporting, first, reinforces supporters' affinity for the regime, and second, assures them that state propaganda outlets are trustworthy. Further, regime supporters reject independent media because the critical reporting of such outlets contrasts with more comfortable belief-consistent coverage of state media. Therefore, politically biased news processing ensures that supporters remain in the echo chambers of propaganda.

The strategy of affirmation propaganda has been overlooked in research on autocracies, partly because of the long-standing argument that citizens recognize the manipulative nature of state media (Mickiewicz 2008; Simonov and Rao 2022). In contrast, I argue that such skepticism is highly contingent on one's political dispositions, and I formally demonstrate that for autocrats who have a large pro-regime majority and face a politically distant opposition, satisfying supporters is more important than persuading those who are still skeptical.

I examine affirmation propaganda in Vladimir Putin's Russia. Putin, a prime example of an "informational autocrat" (Guriev and Treisman 2019), has extensively used propaganda and censorship (Gehlbach 2010; Lipman, Kachkaeva, and Poyker 2018; Beazer et al. 2021), and he maintained strong public support for over two decades. Putin's manipulation strategies are also emulated by other authoritarian and populist leaders.

My analysis is based on three related studies situated in Russia, including a unique large-scale online experiment ($n \approx$ 15,600) in which Russians guessed whether news stories were true or false. My research design has several important features that reduce social desirability and put respondents in a situation similar to real-world news consumption, encouraging them to evaluate a large and diverse set of news stories. The results of this study are consistent with findings from two other samples of the Russian population and robust across various model specifications.

I first demonstrate that affirmation propaganda works with respect to regime supporters: Pro-Putin respondents in my study were substantially more likely to believe propaganda messages and to reject propaganda-inconsistent messages, which are typically published by independent media. Further, in my experiment, I randomly assigned news stories to be attributed either to state propaganda outlets or to independent news sources. Consistent with my argument, Putin supporters were more likely to believe news messages when their purported source was a propaganda outlet. I replicate this result in a survey experiment on a nationally representative sample ($n \approx$ 1,600).

In another large survey on a representative online sample ($n \approx$ 2,100), I show that even though many Putin supporters recognized the pro-government bias of state media outlets, most of them still evaluated these outlets as accurate and trustworthy. In contrast, very few regime supporters found the less biased independent media to be trustworthy. I show that trust in state media and skepticism about critical media among supporters are unlikely to stem from insufficient knowledge of independent news organizations.

These findings highlight the power of affirmation propaganda. If autocrats can boost trust in propaganda outlets by deploying belief-affirming messages, it becomes easier to "sell" their other narratives to the public. Moreover, the flow of identity-consistent news from state media dissuades pro-regime citizens from seeking alternative news sources.

My study contributes to the research on the mechanisms of authoritarian regime support (Geddes and Zaller 1989; Guriev and Treisman 2020a), highlighting a manipulation strategy that may often be more important to autocrats than persuasion. Moreover, my work suggests the conditions under which autocrats may prefer belief affirmation or persuasion, such as the strength of regime support and the rigidity of the opposition. This analysis is related to the research by Mattingly and Yao (2021) on the emotional appeals of propaganda, but while their study focuses on persuasion, I highlight a key role of belief affirmation. My study also helps to explain how other manipulation tactics such as blame-shifting (Rozenas and Stukal 2019) work—affirmation propaganda can make them more appealing to the pro-regime majority.

At the same time, the theory of affirmation propaganda highlights that citizens in autocracies are not simply objects of manipulation and brainwashing. Propaganda can be successful only if it accounts for citizens' existing beliefs. Thus, my analysis contributes to the work on the limits of authoritarian control and manipulation (Rosenfeld 2018; Frye 2021).

By documenting biased perceptions of media and propaganda among Russians, my study joins a small but growing literature on political disagreements in information processing in autocracies (Robertson 2015; Chapman 2021; Huang and Yeh 2017; Wojcieszak et al. 2018; Laebens and Öztürk 2020). I highlight how political dispositions prevent citizens from recognizing the lies of propaganda, even when its bias is obvious. Thus, my analysis helps to understand trust in media in authoritarian regimes (Müller 2013)—a finding that is difficult to explain if we believe citizens to be skeptical about propaganda.

I also shed light on another puzzle in the literature on autocracies: why non-democratic regimes allow independent media, which may undermine the plausibility of propaganda (Gläßel and Paula 2020). Previous work has argued that such media can provide autocrats with useful information (Egorov, Guriev, and Sonin 2009; Lorentzen 2014) or make citizens more content (Kern and Hainmueller 2009; Huang and Yeh 2017). Complementing this research, my analysis suggests that citizens trapped in the propaganda bubble find other news sources unattractive, which reduces the danger of independent media to autocrats while keeping the benefits identified by earlier scholarship. Facilitating access to independent journalism, long thought to be an antidote to authoritarianism (Muratov 2021), may not counter disinformation when citizens choose affirmation propaganda.

Finally, my results are relevant to the formal theoretical work on censorship, propaganda, and Bayesian persuasion (Kamenica and Gentzkow 2011; Gehlbach and Sonin 2014), especially with regard to non-democracies. This research commonly assumes a uniform response to information manipulation among citizens and their ability to observe media bias. My analysis suggests that citizens respond to propaganda and perceive its bias very differently depending on their political leanings. Future formal work in this area may consider explicitly modeling the heterogeneity of political preferences, identities, and news perceptions.

3.1 Affirmation Propaganda as a Strategy of Authoritarian Rule

Autocrats have used information manipulation for centuries, and scholars expect citizens to be suspicious of authoritarian propaganda (Mickiewicz 2008). Thus, theories of propaganda—see, e.g., Gehlbach and Sonin (2014); Luo and Rozenas (2022)—may model it as a form of persuasion, and ask: How do autocrats win over the skeptical public? They may use sophisticated techniques, such as mixing fact with fiction (Stockmann and Gallagher 2011; Gehlbach 2010) or infusing political messages with entertainment (Tolz and Teper

2018), to make their messages more plausible and appealing to moderate citizens. Alternatively, if autocrats understand that propaganda is not credible, they can use it to signal the regime's dominance (Huang 2015b, 2018; Wedeen 1999), induce attitude falsification (Little 2017), distract the public (King, Pan, and Roberts 2017), or undermine alternative information sources (Pearce and Kendzior 2012; Pomerantsev 2015).

However, when the autocrat has strong popular support, especially when this support is rooted in an identity connection between the leader and the public, the calculus shifts substantially. If the majority is already on the autocrat's side, it becomes more important to prevent the erosion of support rather than to persuade skeptics and critics. And there is often a tension between these two goals. In Appendix B, I show formally that if the pro-regime majority is large enough, and if the opposition is ideologically distant, it is impossible to appeal to both groups simultaneously: persuading critics would mean losing supporters. Under such conditions, the autocrat is better off targeting the sympathetic majority, even if that means further alienating the opposition.

Instead of persuasion, the regime's propaganda focuses on repeating the core beliefs of its support base back to this sympathetic public. Because of confirmation bias (Nickerson 1998), regime supporters more easily accept such belief-consistent messages, even if these messages are untrue. Exposure to belief-affirming messages can also reinforce existing beliefs and identities (Stroud 2010; Prior 2013). Therefore, the regime makes propaganda part of the dialogue with its supporters, using belief affirmation to strengthen the identity links between them. I call this strategy *affirmation propaganda*.

Moreover, by focusing on belief-affirming messages, propagandistic media can improve their credibility among regime supporters because news consumers perceive identity-consistent reporting as more accurate (Gentzkow and Shapiro 2006). As a result, pro-regime citizens underestimate the dishonesty of state media and the extent of regime censorship. Even if supporters recognize the pro-government bias of state media, this bias is in their

preferred direction; it may, in fact, signal that these outlets are on the "right" side (Kydd 2003).

Further, attempts to appeal to opposition-minded citizens by decreasing the pro-regime bias may backfire: regime supporters would perceive such more critical news coverage as less accurate and less trustworthy. In other words, affirmation propaganda cannot stray very far from supporters' prior beliefs.

By the same logic, affirmation propaganda helps reduce interest in alternative news sources. The reporting of independent media may be more balanced and objective, but it goes against the beliefs of regime supporters. As a result, they are likely to view such independent reporting as hostile and untrustworthy (Arceneaux, Johnson, and Murphy 2012), especially in contrast to the belief-affirming coverage of state media. Thus, supporters reciprocate the regime's affirmation propaganda by discounting and avoiding independent media.

Consumption of propaganda may then create a self-reinforcing loop: by supplying belief-consistent messages, the autocrat fortifies positive pro-regime feelings among supporters, which makes the latter willing to consume more propaganda and steer clear of critical reporting. Continual consumption of state media may also bolster the perception that these outlets are trustworthy (Feldman 2011).

This is an echo chamber (Jamieson and Cappella 2008), although a peculiar one: citizens may not enter it by choice, as autocrats suppress alternative media. Yet, more independent alternatives exist in almost all autocracies. But affirmation propaganda makes it easier for supporters to accept limited media choice, joining the regime in its censorship.

The weakness of affirmation propaganda is that it fails to resonate among opposition-minded citizens: to be receptive to it, one needs to exhibit pro-regime beliefs in the first place. But autocrats who have a strong support base can tolerate such costs. Today, when political polarization in autocracies is growing, and citizens sort into regime supporters and

opponents (Laebens and Öztürk 2020), this strategy may be increasingly viable. Moreover, in the context of such polarization, critics' opposition to propaganda may even bolster its credibility among supporters, providing them with yet another signal of where propaganda outlets stand.

Of course, many citizens of autocracies are not fervent partisans—they are often detached from politics (Croke et al. 2016; Zhelnina 2020). Affirmation propaganda is less attractive to such depoliticized, "weak" supporters. At the same time, it can still speak to their political identities and their need to belong to a national community, making it less likely that they would abandon the regime. Politically disengaged citizens can also get trapped in state media echo chambers, partly because they lack interest and motivation to make sense of the news or seek alternative news sources (Alyukov 2022). Thus, affirmation propaganda should be less effective with respect to moderate regime supporters, but it would still be more effective in this case than with respect to regime critics.

To sum up, the theory of affirmation propaganda has regime-level implications—this strategy is more attractive when a large majority of the public has an identity connection to the autocrat, and the opposition is politically distant—and individual-level implications. The latter include the following: pro-regime citizens are more likely to believe pro-regime messages but less likely to believe critical (propaganda-inconsistent) messages, compared to regime critics; pro-regime citizens are more likely to trust propagandistic state media and less likely to trust independent (critical) media; when propaganda is more appealing to regime critics, it is less attractive to regime supporters; affirmation propaganda is more effective among core regime supporters than among moderate supporters. This analysis seeks to explain why citizens of autocracies may find propaganda trustworthy, and so it focuses on testing the individual-level implications of the theory, whereas the regime-level implications with respect to choosing affirmation propaganda can be explored in future work. (Also see the conclusion to the dissertation, where I outline the possible first steps for such an analysis.)

3.2 Affirmation Propaganda in Russia

Several features of Vladimir Putin's regime in Russia make it an appropriate case for a study of affirmation propaganda.[9] Throughout two decades, Putin enjoyed strong popular support, usually securing the approval of at least two-thirds of Russians.[10] His approval was partly rooted in economic growth in the 2000s (Treisman 2011). But Putin also forged his pro-regime majority by speaking to Russians' national identity and sharing their grievances about Russia's diminished global standing, which he promised to restore (Greene and Robertson 2019; Sharafutdinova 2020).

Over time, the Kremlin accumulated control over the mainstream media, especially television (Enikolopov, Petrova, and Zhuravskaya 2011; Lipman, Kachkaeva, and Poyker 2018), censoring critical information. The state propaganda outlets[11] promoted a cult of Putin (Cassiday and Johnson 2010) and increasingly focused on anti-Western and nationalist messages (Tolz and Teper 2018), especially after the annexation of Crimea (Lankina and Watanabe 2017).

Given the strong and consistent public support for Putin, it is reasonable that the Kremlin's propaganda appealed primarily to supporters, especially as the opposition movement, which took an increasingly anti-regime stance, failed to expand (Lasnier 2017). Importantly, propaganda was unlikely to have created the pro-Kremlin majority—Putin enjoyed widespread support even in his first years in power when his control of the media was relatively weak. After consolidating control, Putin focused on reinforcing the existing support.

But how did Russians respond to this propaganda strategy? A large majority continued

[9] In the 2020s, Putin's regime took a repressive turn, especially after Russia invaded Ukraine in 2022. This analysis is focused on the preceding years, although it may still explain trust in propaganda during and after the war.

[10] https://www.levada.ru/en/ratings/. These surveys by an independent pollster, as I discuss below, generally produced adequate estimates of presidential approval.

[11] I use the terms "state media," "state-controlled media," and "state propaganda outlets" interchangeably.

to get their news from state media, listing television as the most trustworthy source (Levada Center 2020), and only a few followed independent news outlets still available online (Greene and Robertson 2019; Simonov and Rao 2022).[12] These patterns of media usage suggest that affirmation propaganda may have been effective, but they may also be explained by the logic of convenience or by the non-political content of state media (Gehlbach 2010; Simonov and Rao 2022). To make the case that affirmation propaganda has been successful in Putin's Russia, I examine the key implications of the theory outlined above.

I start with the information processing biases that serve as a basis for affirmation propaganda.

H1a: Putin supporters are more likely to find propaganda messages credible than are opposition-minded citizens (Putin critics).

H1b: Putin supporters are less likely to find propaganda-inconsistent messages credible than are Putin critics.

Further, as propaganda outlets focus on belief-affirming messages,

H2: Putin supporters trust state-run propaganda outlets more than independent media organizations.

At the same time, propaganda's attempts to appeal to critics may backfire among supporters:

H3: When propaganda outlets include propaganda-inconsistent messages, their perceived trustworthiness is increased among Putin critics, but reduced among Putin supporters.

Further, pro-regime citizens underestimate the degree of censorship and deception in state media:

[12] During the invasion of Ukraine, almost all independent media were banned, but they were nonetheless accessible via simple tools such as VPNs.

H4: Putin supporters are less likely than Putin critics to recognize that the coverage of propaganda outlets is censored and inaccurate.

Finally, vulnerability to affirmation propaganda depends on the strength of pro-regime orientations:

H5: Moderate Putin supporters are less receptive to pro-regime messages and less likely to find state media credible, compared to strong Putin supporters.

As noted above, there is a feedback loop between pro-regime dispositions and the consumption of propaganda; estimating the direct causal effects of these factors on trust in propaganda is beyond the scope of my analysis. Instead, the empirical contribution of this chapter is demonstrating how affirmation propaganda can exploit supporters' receptivity to pro-regime messages and ensure that they remain in the authoritarian echo chamber. Thus, my analysis explains how propaganda works by focusing on belief affirmation, not persuasion.

3.3 Research Design

This analysis is based on three surveys conducted in Russia. In all three studies, the participants were shown a number of news stories, including propaganda messages and propaganda-inconsistent messages, displayed in random order. Respondents were asked to indicate whether each story was, in their view, true or false. These evaluations demonstrate regime supporters' receptivity to affirmation propaganda (H1) across different samples of Russians. All three studies also provide evidence that moderate Putin supporters are less prone to affirmation propaganda (H5).

In Study 1, a large-scale online survey fielded on social media in May–June 2020 ("the main study"), I also embedded experiments to examine the perceptions of the credibility of state media outlets with respect to a variety of news stories (H2 and H3). Study 2, a

survey fielded via the polling firm Levada Center in August 2019 ("the national survey"), extends this analysis to a nationally representative sample. Study 3, an online survey fielded via the polling company OMI in May–June 2020 ("the media perceptions survey"), provides evidence that regime supporters find specific state-run news outlets trustworthy and accurate despite the bias (H4).

3.3.1 The Online Quiz (Study 1)

I designed and promoted the main study as a "quiz" that offered respondents an opportunity to test how well they detect false news messages. This approach, inspired by online trivia quizzes,[13] has several advantages in examining the perceptions of propaganda.

By turning news evaluations into a game, I provided internal motivation to evaluate a large number of diverse news messages, ensuring that the results are not overly dependent on some selected stories. The quiz premise also improves accuracy motivation, prompting respondents to answer more honestly and reducing expressive responding to political stories.[14] Further, the quiz was promoted via social media, making the survey experience similar to casual news consumption. My study is the first to use such a realistic instrument to measure evaluations of news stories and news media.[15]

Stories evaluated in the study were news headlines selected from Russian and foreign media and slightly edited for clarity. Some of these statements were false.[16] The quiz was available online for about three weeks, and at each point in time, respondents evaluated fourteen messages selected before the beginning of the study and two "recent" messages, which were regularly scraped from the news aggregator *Yandex.News*. In total, twenty

[13] See, e.g., the recurring BuzzFeed quiz on fake news: https://www.buzzfeed.com/tag/fake-news-quiz.

[14] Increased accuracy motivation may, however, reduce the impact of political reasoning (Prior, Sood, and Khanna 2015). If so, the estimated differences in news perceptions may be somewhat biased downwards.

[15] The accuracy of these evaluations—that is, citizens' ability to distinguish between true and false stories—is examined in the next chapter.

[16] To determine which were true, I relied on fact-checking websites and did additional fact-checking using reputable news agencies.

"recent" messages were included, two at a time. These stories allowed me to increase the ecological validity of the analysis (Pennycook et al. 2020). Respondents could also take the quiz again and evaluate an additional set of sixteen "pre-selected" stories. The full list of stories and the detailed selection procedure are in Appendix C. Some of these stories were also included in Studies 2 and 3 to understand whether the findings generalize to other samples.

The main study was implemented as a stand-alone web application, and respondents were recruited via social media ads on Facebook. Evidence suggests that social media audiences today are no longer dramatically different from the population at large.[17] In 2020, the overwhelming majority of Russians (around 80%) regularly used the internet[18], and a large proportion were Facebook users.[19] I followed the suggestions from B. Zhang et al. (2020) in using Facebook's ad targeting features to make sure that key demographic subgroups were well represented in the sample.

The quiz was completed by 16,935 respondents, but about 12 percent of them did not answer questions about their age, gender, or education, and about 8 percent did not indicate presidential approval. The responses with missing approval were removed from the sample.[20] I also 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). Such irregular responses amounted to less than 2 percent of the data. The resulting data set includes 266,885 decisions on the truthfulness of news messages made by 15,637 respondents. Summary statistics for this and the other two studies are in Table C1 in the appendix.

[17] Moreover, Russian internet users are a highly relevant group for this analysis, as they are more interested in news, and autocrats increasingly target internet audiences (King, Pan, and Roberts 2017; Sanovich, Stukal, and Tucker 2018).

[18] According to the media analytics company Mediascope: https://mediascope.net/news/1250827/.

[19] In June 2020, 36 million people in Russia accessed Facebook at least once: https://ppc.world/articles/auditoriya-shesti-krupneyshih-socsetey-v-rossii-v-2020-godu-izuchaem-insayty/.

[20] In an additional analysis, available upon request, I used a model-based approach to impute the missing approval values, and the results were almost identical.

Establishing receptivity to affirmation propaganda (H1). The quiz included messages consistent with propaganda and messages that went against the narratives of propaganda. Propaganda-consistent stories were positive statements about Russia and its government or negative statements about the West or Ukraine, and they were mostly taken from state-run media. E.g., one such (false) story suggested that "*Pope Francis awards [Russian President Vladimir] Putin with a medal called 'Angel, Guardian of Peace.' The medal is awarded once in a hundred years, and Putin is its fifth recipient.*" Propaganda-inconsistent messages contained negative statements about Russia and its government or positive statements about other countries; such stories were mostly borrowed from independent media. For example: "*Putin signs a new law that gives him lifetime immunity and the right to be a lifetime senator.*"

In the analysis below, I examine Russians' receptivity to propaganda messages by comparing the share of Putin supporters who said that these messages were true with the share of Putin critics who said the same; an analogous comparison is drawn for propaganda-inconsistent messages. These comparisons are estimated as covariate-adjusted contrasts based on the following linear regression:

$$R_{is} = \alpha + \beta DIRECTION_s * SUPPORT_i + \gamma DIRECTION_s + \delta SUPPORT_i + \psi X_{is} + \epsilon_{is},$$

where R is whether the respondent said the story is true, $DIRECTION$ is a set of dummies indicating whether stories are propaganda-consistent, propaganda-inconsistent, or neutral, $SUPPORT$ is a set of dummies indicating levels of support for Putin (see below), and X are controls, including respondent age, sex, and education (in some models), story-level covariates, and the date of the survey. i indexes respondents, and s indexes news stories. Heteroskedasticity-robust standard errors are clustered on the respondent level.

Establishing the perceived credibility of state propaganda outlets (H2). To examine whether supporters view state-run outlets as more trustworthy, I adopted an approach common in the research on source credibility (Botero et al. 2015; Truex 2016). News stories shown to participants were randomly attributed to one news outlet from a list of state

and independent news organizations. The name and logo of this randomly chosen outlet were displayed above the text, as shown in Figure C1 in the appendix. The nature of the treatments was revealed in the post-survey debriefing.

Each story received either a **state media treatment** (a government-controlled outlet) or a **critical media treatment** (an editorially independent outlet). At the time of the survey, consumers could easily access all assigned news outlets. State media treatments included the two main television stations, *Channel One* and *Russia-24, RIA Novosti* (the main official news agency), *Komsomolskaya Pravda* (*KP*; the most popular newspaper and website in Russia), and *RT* (*Russia Today*), a television channel targeted at foreign audiences but also popular in Russia. All except *KP* were owned by the state; *KP* was controlled by Sergei Rudnov, a son of Vladimir Putin's friend Oleg Rudnov. Critical media treatments included *Rain,* an online television station, *Meduza,* a popular website, and *Echo of Moscow,* a liberal radio station and a website.[21] Randomization worked as intended (see Table C3 in Appendix C).

The texts of the news stories were identical in all treatment groups, which means that the differences in the evaluations of news stories should reflect the differences in the perceived credibility of the source. The quantity of interest is the difference between the share of respondents who deemed news stories to be true under the **state media treatment** and the share of respondents who said so under the **critical media treatment**. To establish this effect for Putin supporters and Putin critics, I estimate the following regression:

$$R_{is} = \alpha + \beta SOURCE_{is} * SUPPORT_i + \gamma SOURCE_{is} + \delta SUPPORT_i + \psi X_{is} + \epsilon_{is},$$

where R is the respondent's evaluation of the story (true or false), $SOURCE$ is a set of dummies indicating whether the source is state-controlled or indicating individual news sources (in some models), $SUPPORT$ indicates support for Putin, and X are respondent-

[21] One other treatment was *RBC*, a private news agency recently acquired by a Kremlin-friendly oligarch. *RBC* was excluded from the main analysis, but as a robustness check, Figure D6 in Appendix D presents the main experimental result assuming *RBC* is state-controlled, and the estimates are similar.

level and story-level controls. This analysis does not include three "pre-selected" stories from the beginning of the quiz, which were not a part of the experiment, and sixteen stories from the second quiz (see above), which respondents saw after the debriefing.

3.3.2 The National Survey (Study 2)

I embedded a similarly designed experiment in a nationally representative survey of 1608 Russian adults by the polling firm Levada Center. As in the main study, respondents saw several news messages, including propaganda and propaganda-inconsistent stories, which were attributed to a state-run or a critical media outlet. The respondents were to decide whether these stories were true. For practical reasons, there were three story vignettes and only two news sources, *Channel One* and *Echo of Moscow*. Further details of the survey and the embedded experiment are provided in Appendix E. I estimate the effect of the state media treatment using the same strategy as with the main experiment.

3.3.3 The Media Perceptions Survey (Study 3)

The third study establishes whether Putin supporters are more likely to perceive state-run media outlets as accurate and trustworthy (H4) and whether they view critical independent media skeptically. The survey was conducted via the polling company OMI, drawing a sample of 2,100 from OMI's large online panel of respondents in all eight federal districts of Russia. I implemented age and sex quotas derived from a nationally representative sample of the Russian population.

The first measure of interest is whether one trusts any propagandistic media or any independent media. I asked respondents to name two or three news outlets that they trust the most. Then, two dummy variables capturing whether one named any of the state-run television stations or any of the critical news outlets,[22] respectively, were constructed. I

[22]The full list of state-controlled and critical media outlets is provided in Appendix C.

estimated the differences in trust between supporters and critics via the following regression:

$$T_i = \alpha + \beta SUPPORT_i + \gamma X_i + \epsilon_i,$$

where T is trust in state-run or critical media, $SUPPORT$ is a set of dummies indicating support for Putin, and X are sociodemographic controls. Heteroskedasticity-robust standard errors were used.

The second set of measures captures the perceived accuracy and bias of four state media outlets: *Channel One*, *Russia-24*, *RIA*, and *RT*. I used two dimensions to capture the perceptions of accuracy (Meyer 1988; Kohring and Matthes 2007): (1) whether these news outlets offer complete news coverage (they are not censored), and (2) whether they report the facts accurately; the question wording is in Appendix F. Two additional dimensions were used to characterize media bias: (1) whether the coverage of the outlet is pro-government, anti-government, or neutral, and (2) whether the outlet is editorially independent of the authorities.

Given multiple answer options, including "hard to say," I analyze these perceptions via multinomial logistic regressions, and I control for whether one indicated knowing the state-controlled outlet in question. Otherwise, the regression setup is the same.

3.3.4 Measuring Support for Putin

All three studies included the following question: "*Do you approve of the performance of the president of Russia?*" Response options were: certainly approve, somewhat approve, somewhat disapprove, certainly disapprove. This language has been commonly used in Russian polls 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), at least before Putin's regime became more repressive in 2022. The risk of

overstating support in an anonymous online survey was even lower (Huang and Yeh 2017).[23] To mitigate the risk of reverse causation, the question about Putin's support was asked before any information treatments.

Figure 3.1 shows the distribution of presidential approval in all three surveys, indicating that in the two online surveys, the share of supporters is substantially lower. For this study, it is most important that there is sufficient variation in presidential approval within each sample, but the diversity of these samples also provides a chance to establish that the relationships of interest hold in different groups of the Russian population.

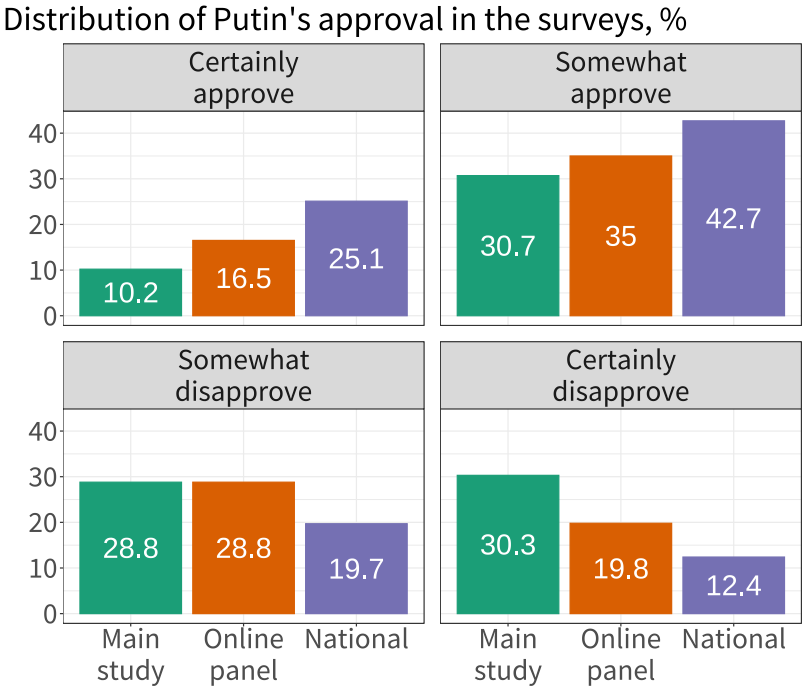

Figure 3.1: The distribution of presidential approval in the three survey samples: the social media sample, the online sample (OMI), the nationally representative sample (Levada)

Support for Putin is used here as a key measure of pro-regime orientations. In the appendix, I report the experimental results with additional measures of these orientations, which reflect the anti-Western and pro-state views common among Putin supporters; these results are similar.

[23] In the pre-testing of the quiz, there was virtually no difference in the probability of continuing the survey depending on whether the question about presidential approval was included.

3.4 Findings

3.4.1 Supporters Are Receptive to Regime Propaganda

Figure 3.2 shows that Putin supporters on average were 11 percentage points more likely to find propaganda stories credible than were Putin critics, which is consistent with hypothesis H1a. The difference is virtually unchanged when the estimate is adjusted for covariates, including age, gender, and education, and when the analysis is restricted to respondents who evaluated news stories without any sources (Figure D1). The pattern is consistent between individual stories (Table C2) and different samples of Russians (Figure D2).

As an example, 73 percent of pro-Putin respondents in the main study found credible a fabricated story that California had banned the words "husband" and "wife" to support same-sex marriages. Such statements conform to the anti-LGBTQ and anti-Western narratives that the Putin regime promotes and that many of its supporters subscribe to.

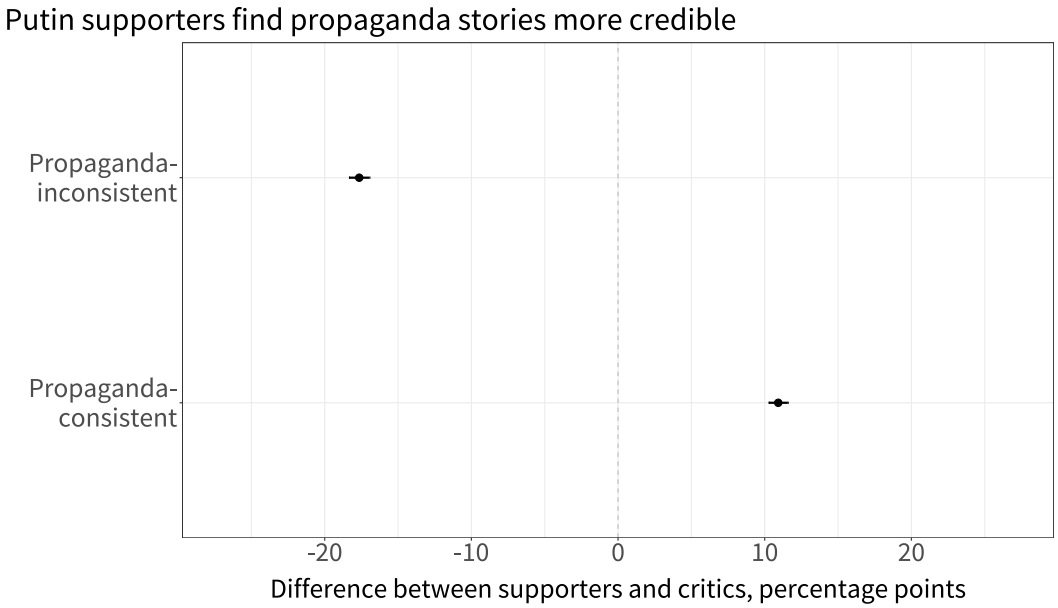

Figure 3.2: Difference in the shares of Putin supporters and critics who found propaganda-consistent and propaganda-inconsistent stories credible. Results from the main study. 95% confidence intervals are shown

Figure 3.2 also shows that Putin supporters were, on average, about 18 percentage points less likely to recognize propaganda-inconsistent stories as true, as suggested by hypothesis H1b. Only 16 percent of supporters, for example, found credible a report that Putin had given himself lifelong immunity from prosecution, and only 14 percent believed a report that the Ukrainian economy had been growing faster than the Russian economy. In sum, regime supporters have a strong bias against such critical information.

3.4.2 Supporters Find Propaganda Outlets More Credible Than Independent Media

According to my theory, the focus on belief-consistent information makes state propaganda outlets appear more credible to supporters compared to independent, critical media (H2).

Figure 3.3 shows the effect of changing the treatment from an independent media source to a state-run source on the probability of saying that news stories are true, depending on presidential approval.[24] "Strong" supporters or critics are those who "certainly" approve or disapprove of the president, and "moderate" supporters or critics are those who "somewhat" approve or disapprove.

In line with hypothesis H2, Putin supporters were 2-3 percentage points more likely to say that a story was true when it was attributed to a state propaganda outlet, compared to when an independent news outlet was assigned.[25] This effect is of similar magnitude to the effects of media source cues established in other studies (Clayton et al. 2020), and it is striking that respondents would find state media more credible, given that these outlets often engage in censorship and disinformation.

These results are robust to different model specifications and to using alternative measures of pro-government orientations (Tables D1 and D4, Figures D3 and D6 in the

[24]The effect is the difference between the share of respondents that found a story true and the share of respondents that found a story false, averaged for all stories and adjusted for covariates. The effect is calculated for each subgroup via the R package *emmeans* (Lenth 2019) based on the regression model.

[25]Figure D4 in the appendix shows that the results are consistent across individual state-run and independent news sources.

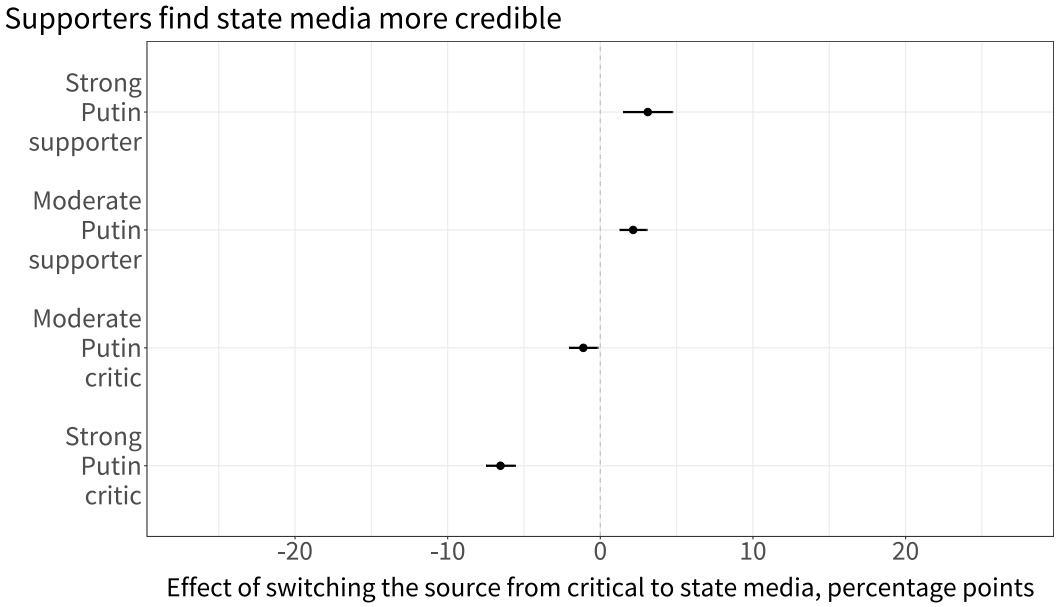

Figure 3.3: The effect of changing the treatment (source attribution) from critical to state media outlet on evaluations of news stories, by approval of Vladimir Putin. Calculations based on a linear regression of news story evaluations on state control and presidential approval; results from the main study. 95% confidence intervals are shown

appendix). The results are, moreover, consistent across different kinds of news stories (Table D5 and Figure D5). Further, in the experiment that I embedded in a national survey by the Levada Center (Study 2), Putin supporters also perceived information from state media as more credible (Figure E1 in the appendix).

The source credibility effects documented here make affirmation propaganda more effective: regime supporters who encounter propaganda stories would be even more likely to believe these stories if their source is a state-run media outlet. On the contrary, if supporters see critical stories about the government, they would find such messages even less plausible when the source is an independent outlet.

3.4.3 Critical Messages From State Media Backfire Among Supporters

Hypothesis H3 suggests that if state media outlets moderate their pro-regime bias by sending more critical messages, it can improve trust among regime critics but undermine

trust among regime supporters. We can test this possibility by examining the effect of switching news sources with respect to propaganda-inconsistent stories.

Figure 3.4 supports this expectation. First, for Putin critics, the effect of state media was closer to zero when propaganda-inconsistent stories were considered, which means that opposition-minded respondents were less skeptical about propaganda outlets when these outlets sent more critical messages. Moreover, the effect of state media was essentially zero when strong Putin supporters evaluated propaganda-inconsistent news stories; thus, when propaganda outlets attempt to appeal to critics, they may lose their credibility advantage among supporters. The evidence here is not definitive (the confidence intervals overlap), but it highlights an important trade-off implied by the theory. It also suggests that the aforementioned credibility advantage of state media among supporters may be explained by the emphasis that state media place on pro-regime messages.

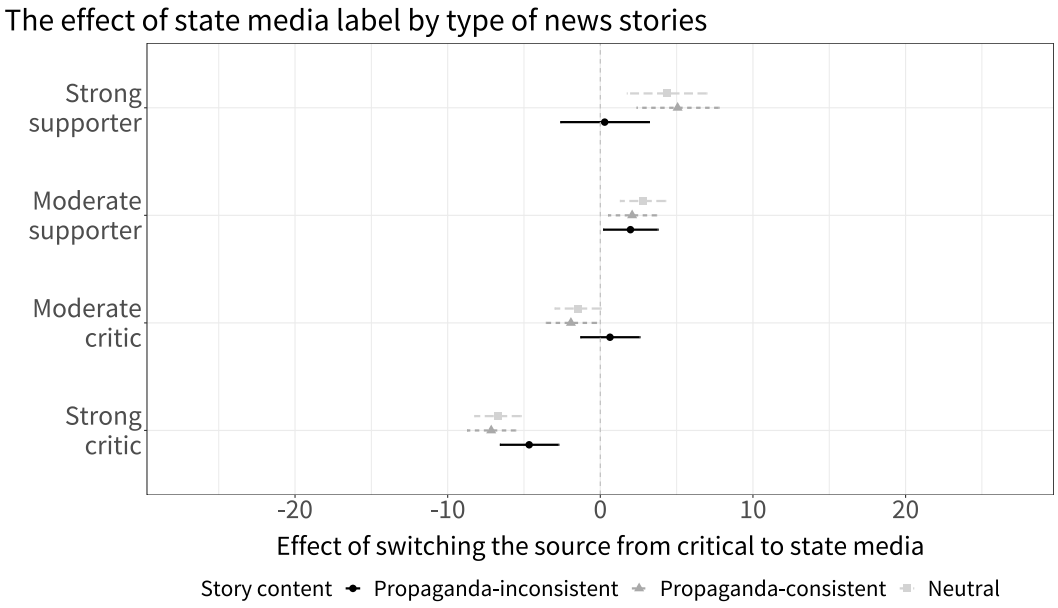

Figure 3.4: The effect of changing the treatment from critical to state media outlet on evaluations of news stories, by approval of Vladimir Putin and by the political content of news stories. Calculations based on a linear regression of news story evaluations on state control and presidential approval (see text for details); results from the main study. 95% confidence intervals are shown

3.4.4 Supporters Find State Propaganda Outlets Trustworthy Despite the Bias

In the online survey fielded via OMI (the media perceptions survey), I asked Russians to report their perceptions of specific state-run media outlets. First of all, Figure 3.5 demonstrates that Putin supporters were very likely to list state television channels among their trusted sources (for regression estimates, see Table F2 in the appendix). About 80 percent of strong regime supporters reported trusting at least one state television station, in contrast to just about 20 percent of strong critics.

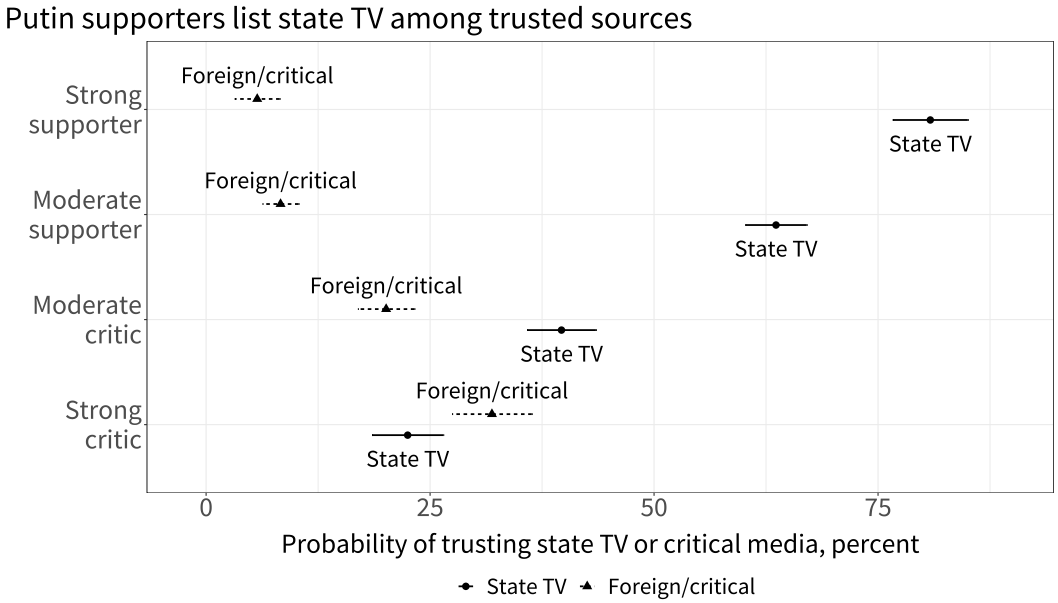

Figure 3.5: The probability of trusting critical media or state television, by approval of Vladimir Putin. Calculation based on a linear regression of media use (dummy variables) on presidential approval and demographic covariates; results from the OMI online panel (Study 3). 95% confidence intervals are shown

The respondents were also asked to evaluate key state media outlets—*Channel One*, *Russia-24*, *RIA*, and *RT*—along four dimensions: whether their coverage was accurate, complete (uncensored), and politically unbiased, and whether these outlets were politically independent. Figure 3.6 reports the percentage of Putin supporters and critics who agreed with such characterizations of state media (regression tables are in Appendix F).

Importantly, the majority of supporters recognized that state media were influenced by

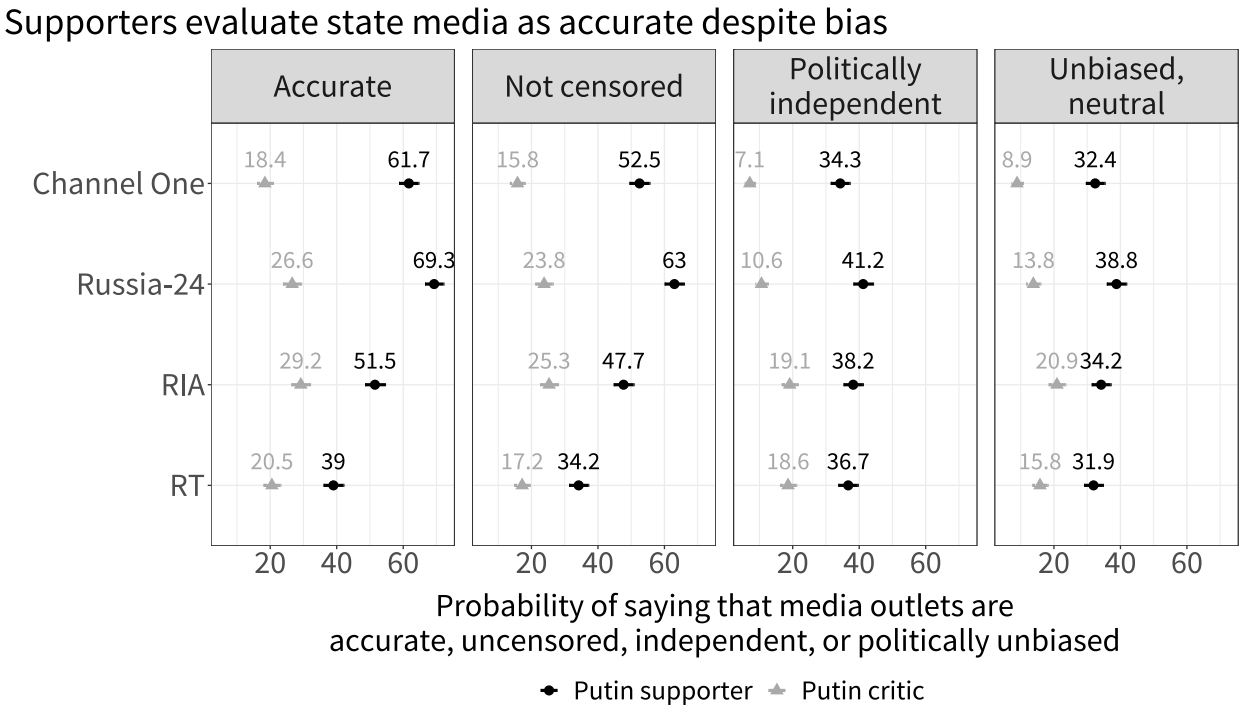

Figure 3.6: The probability of agreeing with the statements that state media (Channel One, Russia-24, RIA, RT) are accurate, not censored, politically independent, and politically unbiased, by approval of Vladimir Putin. Calculations based on multinomial regressions of news source evaluations on presidential approval and demographic covariates; results from the OMI online panel (Study 3). 95% confidence intervals are shown

the authorities and were not neutral or objective; only 30–40 percent of pro-Putin respondents believed state propaganda outlets to be politically neutral and independent. But, consistent with hypothesis H4, most supporters thought the coverage of propaganda outlets to be generally accurate, and they said that these outlets rarely engaged in censorship. For example, 58 percent of supporters admitted that *Channel One* was not independent of the authorities. And yet, 89 percent of those who recognized this lack of independence claimed that *Channel One*'s coverage was mostly accurate, and 53 percent listed this station among trusted news outlets. This underscores how powerful affirmation propaganda can be and how little citizens may value media independence when authoritarian media are biased in their preferred direction.

In addition, along all these dimensions, as in the source credibility experiment, Putin supporters evaluated state media much more positively than did critics. Among opposition-minded respondents, only a small minority said that state propaganda outlets were accurate and uncensored, and very few called these outlets unbiased and independent. This large divergence between critics and supporters emphasizes the main trade-off explained above: it is not worth it to make state media more appealing to the very skeptical minority given that the majority is fine with these media, and drastic changes to the propaganda coverage may alienate some of the pro-regime citizens.

Crucially, the positive perceptions of propaganda outlets among pro-regime citizens are not a result of poor awareness of alternative news sources. In my online panel, almost 60 percent of Putin supporters reported knowledge of some independent news organizations, which at the time of the survey were easily available online. However, as Figures F2 and F3 in the appendix show, pro-regime respondents who were aware of independent media still trusted state media a great deal, and they evaluated state-controlled outlets quite positively.

Regime supporters did not view independent media as a better alternative even if

they found state media inaccurate or biased. Among pro-Putin respondents who found *Channel One* accurate and truthful, 5.4 percent reported trusting at least one independent news outlet, but among supporters who admitted that *Channel One* often publishes false information, this proportion was 6.6 percent—essentially, the same.

This analysis makes it clear that for a substantial number of pro-Putin respondents, being in the propaganda bubble was a choice, not an inevitability.[26] Regular consumption of propagandistic media may, in turn, make citizens even less sensitive to the bias of propaganda (Feldman 2011), reinforcing trust in state-run outlets.

3.4.5 Affirmation Propaganda Is Less Effective Among Moderate Supporters

Hypothesis H5 suggests that receptivity to affirmation propaganda depends on the strength of one's connection to the regime. My data consistently support this expectation. In the main study, moderate Putin supporters were 5–6 percentage points less likely to believe pro-government stories but more likely to believe propaganda-inconsistent stories, compared to strong supporters (the rightmost panel in Figure D1). Moderate supporters were also substantially less likely to trust state media (Figure 3.5) and to evaluate these media as accurate. For example, among strong Putin supporters, 75 percent said that *Channel One*, a key propaganda channel, provided accurate news coverage, but among moderate supporters, only 50 percent agreed.

Moderate supporters were thus more likely to understand the propagandistic orientation of state media and to resist their messaging. Affirmation propaganda may still help autocrats to dampen such skepticism or at least to deter citizens from seeking alternative information sources, but it has its limits. And if public support for the regime erodes, such propaganda would lose some of its power.

[26] Figure F1 in the appendix shows that pro-Putin respondents, especially strong supporters, predominantly relied on state propaganda outlets, and they were highly unlikely to use any independent media.

3.5 Conclusion

This study has used a unique experimental approach and survey data from Russia to demonstrate that belief affirmation can improve trust in authoritarian propaganda and, ultimately, help autocrats maintain regime support. Pro-regime citizens are willing to tolerate a limited media choice and the bias of pro-regime news outlets. Many, in fact, welcome such biased news coverage, and they remain locked into pro-regime content by choice, being averse to independent media and critical information.

My analysis thus suggests that leaders such as Vladimir Putin do not have to be masters of persuasion. Rather, the secret of their stable public support is that they have found narratives and emotions that resonate with citizens, and they craft propaganda messages around these narratives.

Further, extending access to alternative news sources may not deter citizens from consuming propaganda.[27] Supporting independent journalism is still important, but its role as an antidote to propaganda is limited, as it mostly appeals to citizens who are already critical of their governments.

However, affirmation propaganda tactics make it increasingly difficult for autocrats to reach out to the opposition-minded public. Belief-affirming messages targeted at supporters may even provoke a backlash among critics. Peisakhin and Rozenas (2018) describe a similar polarizing effect of Russian state television in Ukraine. Yet, the hardening of the opposition pushes autocrats to double down on affirmation propaganda as they lose any hope of convincing the critics.

Belief-affirming messages are also ineffective when autocrats need to convince the public of something genuinely unpopular. For example, Russian state media failed to promote anti-COVID measures (Kovalev 2021) despite using affirmation propaganda tactics,

[27] Similarly, Y. Chen and Yang (2019) demonstrate that many Chinese would not engage with independent foreign media even when they are given easy access to such media.

such as blaming the West for the pandemic and celebrating Russia's triumph in developing its own vaccine. Research also shows that Russians process propaganda more scrupulously when it comes to economic problems (Rosenfeld 2018).

The lessons from this analysis apply to electoral autocracies and "illiberal democracies" that rely on public support and information manipulation, avoiding large-scale repression. Thus, future research may examine how effective affirmation propaganda is in other such regimes, and to what extent leaders such as Recep Tayyip Erdoğan in Turkey or Viktor Orbán in Hungary deliberately apply belief-affirming tactics.

Further, it is important to study how and under what circumstances autocrats choose affirmation propaganda or strategies focused on persuasion. What happens, for example, when leaders who rely on belief-affirming tactics start losing support? My theory suggests that switching to persuading the opposition may be more effective in a situation like this, but it is important to investigate whether such strategy shifts are successful.

It is also worth considering how affirmation propaganda operates when an informational autocrat turns to harsher and more repressive tactics, as Vladimir Putin did during the war against Ukraine in 2022, blocking access to independent news sources and introducing punishments for telling the truth about the invasion. Does such sudden censorship affect citizens who rely mainly on state media? Does affirmation propaganda maintain its impact when autocrats demand wartime sacrifices from citizens?

Finally, why and how are citizens able to resist authoritarian propaganda and disinformation? As my analysis shows, some regime supporters perceive state propaganda skeptically despite its emphasis on belief-affirming messages. Understanding what makes citizens less vulnerable to information manipulation and under what conditions citizens become more skeptical and seek alternative information sources is an important avenue for future research.

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

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 authoritarian governments use (Rozenas and Stukal 2019; Sanovich, Stukal, and Tucker 2018), but how well citizens detect disinformation in these regimes is poorly understood. It is, however, very important to learn when individuals are more capable of recognizing the falsehoods of authoritarian propaganda, especially as various actors in democracies are adopting authoritarian disinformation tactics, and autocrats themselves increasingly spread misinformation abroad (Walker and Orttung 2014; Erlich and Garner 2021).

This chapter aims to answer two questions: First, how well do citizens in an authoritarian regime identify false news stories and distinguish misinformation from real news? And second, what individual characteristics are associated with more accurate news content evaluations? My study is the first attempt to investigate these questions systematically in an autocracy. Research on autocratic regimes has examined the effects of rumors and their rebuttals by governments (Huang 2015a; Wang and Huang 2021), the spread of health misinformation (K. Chen et al. 2020) and conspiracy theories (Radnitz 2021), or citizens'

perspectives on authoritarian media and their skepticism about propaganda (Mickiewicz 2008; Wedeen 1999; Huang 2018), but this work does not measure how well citizens distinguish between true and false news content. Arechar et al. (2022) examine citizens' capacity to identify misinformation in sixteen countries, including Russia, China, and some other autocracies, but this study only included news headlines about COVID-19, not more general news content or stories typically spread by state propaganda, and it has not considered the characteristics of media environments or authoritarian political systems.

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 this literature, I identify several individual characteristics that may affect one's propensity to detect false news, including the patterns of news consumption, sociodemographic characteristics, and political dispositions. I discuss how these individual characteristics may improve or impede citizens' capacity to judge news stories in an authoritarian environment dominated by state propaganda, and I examine how likely citizens that vary along these dimensions are in practice to correctly determine whether different kinds of news stories, including propaganda messages and the reporting of critical independent media, are true or false.

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. Russian propagandists also spread their disinformation in other countries (Peisakhin and Rozenas 2018; Erlich and Garner 2021), attempting to undermine democratic institutions (Yablokov 2015; Fisher 2020) and often finding their way into the coverage of Western media (Watanabe 2017).

I examine Russians' capacity to recognize misinformation using a unique large-scale online study ($n \approx$ 60,000), designed and promoted as a quiz that offered the participants a chance to test how well they recognize fake news. As discussed in the previous chapter,

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 social desirability bias. The study was conducted twice, in 2019 and 2020, asking 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 online news aggregator, *Yandex News*.[28] For each story, participants indicated whether they believed it to be true or false. In total, I examine more than 1 million such decisions on the veracity of news stories. In addition, I analyze the results of analogous news evaluation tasks that I included in a separate survey on a sample drawn from a diverse Russian online panel ($n \approx$ 2,100).

Overall, Russians did a poor job distinguishing between true and false stories. The average accuracy of responses in the main study was just 51 percent, only slightly better than a random guess. The accuracy rate in the additional survey was even lower. Thus, contrary to existing research that portrays citizens of autocracies as discerning and skeptical news consumers, Russians often failed to accurately evaluate news stories, and they were very vulnerable to false messages.

Respondents who regularly consumed news from state-run outlets, in fact, gave on average less accurate evaluations than those who used more neutral news sources or those who relied on independent, critical media. While consumers of state media were not far behind other participants, this finding, again, counters the idea that continual exposure to authoritarian propaganda can improve news literacy.

The most important predictor of the capacity to recognize falsehoods was whether news stories in question were congruent with respondents' political dispositions. Opposition-minded Russians, especially those who consumed independent media, were much more often correct with respect to false propaganda stories than were regime supporters. Such "politicized" news processing may be beneficial in an environment dominated by state

[28] Note that the analysis in the previous chapter considered only the 2020 survey.

propaganda, giving regime critics and consumers of independent media a better chance of resisting misinformation. 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.

By highlighting the vulnerability of regime supporters to false propaganda messages, my analysis 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 in my study were also strongly averse to propaganda-inconsistent messages, even if such messages were true. Thus, independent, critical information becomes less of a threat to autocrats when regime supporters themselves reject such information (Robertson 2015).

It is important to note, however, that regime supporters were not inherently less capable of distinguishing between true and false stories—their erroneous judgments were limited to political stories. This may be seen as a silver lining: If the supply of false propaganda stories is reduced, and pro-regime citizens find themselves in a more neutral information environment, they would err less frequently.

Further, opposition-minded citizens were also quite prone to false critical stories—that is, falsehoods consistent with their political dispositions. This highlights the broader challenge of fighting misinformation and propaganda in a situation when many citizens process information through political filters. Scholarship on authoritarian regimes often implies that opposition-minded citizens tend to be more informed and discerning news consumers (Reuter and Szakonyi 2015; Huang and Yeh 2017). My analysis, however, suggests that such citizens can still be prone to misinformation, adding to the emerging consensus that susceptibility to like-minded falsehoods is a universal flaw of reasoning (Flynn, Nyhan, and Reifler 2017; Ditto et al. 2018), although this flaw makes regime supporters worse off.

4.1 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 one processes news information. Some scholars argue that citizens still maintain critical capacity and the ability to extract useful information from the news in such manipulated environments (Koch 2013; Rosenfeld 2018). Others even suggest that state manipulation of the media even prompts 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 becoming less interested in news information (Meyen and Schwer 2007; Zhelnina 2020). Individuals in such regimes may report informational helplessness, an inability to make sense of the news (Alyukov 2022). Even those who believe themselves to be discerning can still end up reproducing propagandistic narratives (Szostek 2016). Moreover, the skepticism described by Mickiewicz (2008) and others may not be as beneficial as it may sound: If citizens are skeptical and cynical about everything (Wedeen 1999), they may have trouble distinguishing between false and true information. And autocratic leaders may, in fact, deliberately undermine trust in any information (Pearce and Kendzior 2012; Walker and Orttung 2014) in order to foster such confusion, helplessness, or indiscriminate cynicism.

Given the lack of scholarly consensus on the subject, the first goal of my analysis is to establish how well citizens in an authoritarian country such as Russia can ascertain news veracity—that is, determine whether news stories are true or false. In the analysis below, I will consider the accuracy of evaluations with respect to both false and true messages. If citizens are generally skeptical, they may often successfully detect false stories but fail to recognize true stories. If citizens are too credulous, however, they would correctly determine when messages are true while failing to detect falsehoods.

The second goal of this chapter is to understand the factors that can improve or undermine citizens' capacity to evaluate correctly news content in the authoritarian context. I explore a variety of theoretical predictions about such factors, building both on the research on news processing in autocracies and on the studies of misinformation in other political contexts. In some cases, both strands of research converge on the same predictions, but in other cases, research on autocracies and research on democracies 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 suggests that citizens who rely on partisan media may end up having stronger misperceptions (Jamieson and Albarracin 2020; Weeks et al. 2021). State media outlets in autocracies can be seen as a type of hyperpartisan media, as they relentlessly promote the government line and often push falsehoods.[29] The constant 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 research on autocracies, as mentioned above, suggests that exposure to state propaganda outlets may teach citizens to be more discerning news consumers. If so, consumers of state media would evaluate news more accurately. It is thus an empirical task to distinguish between these possibilities.

Another potentially important factor is the variety of news sources to which one is exposed. Recommendations designed to curb the spread of misinformation often include a suggestion to consult multiple information sources.[30] 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, 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 more accurately

[29] In the analysis below, I may use the terms "state media" and "propaganda outlets" interchangeably.
[30] https://www.facebook.com/help/188118808357379

determine true and false stories.

Further, the research on political information processing strongly suggests that citizens tend to treat like-minded messages favorably while being more skeptical about politically incongruent news information (Taber and Lodge 2006; Jerit and Barabas 2012; Schaffner and Luks 2018). In the previous chapter, I have shown that this phenomenon also applies to autocracies such as Russia, but it is still unclear to what extent such political biases affect vulnerability to misinformation.

An optimist might hope that political biases are less potent with respect to outright disinformation, and citizens would still be able to detect such fake stories even if when these messages are congruent with their beliefs. There might also be a hope that politically biased processing would be less pronounced in the case of authoritarian disinformation given that most citizens in autocracies have extensive experience with the state's attempts to manipulate them.

A less optimistic account would maintain that misinformation and false regime propaganda are processed through the same political lens as are other kinds of political stories. In that case, pro-regime citizens would be vulnerable to false propaganda messages, whereas opposition-minded citizens could recognize such false propaganda fairly well. 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 2020a). 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, in an authoritarian country, older citizens may have more experience discerning the lies of propaganda. As with exposure to state propaganda outlets, which of these patterns we should observe in autocracies is an empirical question.

I should note that this analysis does not aim to establish causal relationships. Rather, it is intended as a key first step in evaluating vulnerability to misinformation in authoritarian regimes. Future work may investigate the causal impact of particular variables of interest in detail—for example, whether one's reliance on state-controlled news sources causes vulnerability to false propaganda stories, or the latter, instead, causes the former.

4.2 Research Design and Data

This study is situated in Russia, an authoritarian regime that has for decades relied on information manipulation in order to survive and maintain popular support (Guriev and Treisman 2019). Under Vladimir Putin, the Russian government has been spreading propaganda and disinformation via the 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 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 in the news, I conducted two online surveys in August 2019 and in May–June 2020. I complemented these results with data from a survey fielded on a large online panel maintained by the Russian polling firm OMI; for further details on this additional survey, see the previous chapter.

The design of the two main surveys 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 their beliefs about the truthfulness of these news stories. Participants in my study 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. My study is the first application of this approach in an authoritarian context.

As discussed in the previous chapter, the surveys were promoted as "quizzes" that offered participants to test how well they could detect falsehoods in the news. At the end of the survey, respondents learned their score—the total number of correct answers. 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 study as a quiz also allowed me to place news evaluations in a setting similar to casual news consumption, blending in with entertainment content respondents may encounter online. Moreover, the quiz 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 quiz was implemented as a stand-alone web application; in the appendix.

The first quiz consisted of sixteen news stories, and after completing it, the respondents were offered to evaluate sixteen additional stories. In the analysis, I use responses from both quizzes, adding a dummy for the second quiz.[31]

Note that news stories were displayed together with the names and the logos of state-run or independent news outlets, which were randomized (see an example in Figure C1 in the appendix). These treatments were designed to elicit respondents' perceptions of media credibility, which were examined in detail in the previous chapter. The source assignment was random with equal probability, and various robustness checks discussed below demonstrate that these source labels did not affect the results with respect to false

[31]Most respondents took only the first quiz.

news recognition.

4.2.1 Selection of News Stories

As discussed in the previous chapter, I collected a set of news headlines from various Russian and foreign media in the months preceding the study; headlines were slightly extended or in some instances edited for clarity. Several false or satirical news statements published by Russian and foreign media were also added. A guiding principle was that the participants should not perceive the stories as obviously true or false. Fact-checking websites were used to determine the truthfulness of messages, and additional fact-checking was performed using reputable news agencies. For the list of stories and the average accuracy of responses for each story, see Tables G2 and G3 in the appendix. Stories included in the OMI survey are in Table G4.

Pennycook et al. (2020) emphasize that to ensure ecological validity, studies of susceptibility to false news need to include a large number of diverse news messages. The 2020 survey included 50 stories, and the 2019 survey included 32 messages (8 stories were included in both surveys). Some stories were consistent with propaganda narratives—these were positive statements about Russia and its government or negative statements about other countries. Propaganda-inconsistent stories presented negative statements about Russia and its government or positive statements about Western countries or Ukraine. I also included several politically neutral and non-political stories. Some stories were about domestic Russian developments, whereas others were focused on international developments.

To further improve ecological validity, the 2020 survey included a random selection of stories from Russia's largest news aggregator, *Yandex News*. Millions of Russians get their news from such aggregators rather than from news organizations directly, and this sampling of stories approximates the news content to which Russian internet users were

likely to be exposed in real life at the time of the survey. In the first quiz, each respondent evaluated two "recent" stories, which varied depending on the day, 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. For further details on the selection procedure, see appendix C.

4.2.2 Measuring the Variables of Interest

To capture media use, I asked the following question: "*What 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 and takes the following values: using only state television channels; using only or mostly state-run media (including online state-run outlets); 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 only asked in the 2020 survey; some respondents in the 2020 survey were 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. As discussed in the previous chapter, a recent study has found that surveys asking such questions produced adequate estimates of presidential approval (Frye et al. 2017), and the risk of exaggerating support in an anonymous online survey was even lower.

Questions about media use and Putin approval were asked before the quiz in order to avoid reverse causality (whereby exposure to news stories affects responses about media use or approval). I also asked respondents about their age and gender and whether they had a college degree.

4.2.3 The Sample

Respondents were recruited via social media ads on Facebook, using Facebook's ad placement algorithms. While social media users in Russia, as in other countries, are younger, more tech-savvy, more urban, and often more liberal (Reuter and Szakonyi 2015), they increasingly resemble the population at large. In 2020, the overwhelming majority of Russians (approximately 80%) regularly used the internet[32], and a large proportion were Facebook users.[33] Moreover, this audience is of primary interest to scholars of misinformation, as internet users consume news more frequently and often encounter false news.

I used ad targeting to ensure that all major demographic subgroups were well represented in the sample. One key difference between my sample and the broader Russian population was that most of my respondents had a college degree, whereas, in general, less than half of Russian adults are college-educated. I also recruited some respondents in the 2019 survey from VK, Russia's most popular social media platform, the audience of

[32]According to the media analytics company Mediascope: https://mediascope.net/news/1250827/.

[33]In June 2020, 36 million people in Russia accessed Facebook at least once: https://ppc.world/articles/auditoriya-shesti-krupneyshih-socsetey-v-rossii-v-2020-godu-izuchaem-insayty/.

which is more similar to the population at large, and I included several news evaluation tasks in a survey on a diverse online panel by the polling firm OMI. The results, as shown below, were similar across these samples.

As in the analysis in the previous chapter, 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). The resulting 2020 sample includes 385,468 decisions on 50 news messages,[34] and the 2019 sample includes 632,717 decisions on 32 messages. Some respondents did not fill out the part of the questionnaire with sociodemographic and political questions, and the analyses with these covariates use smaller samples; see regression tables and the summary statistics in Table G1 for details.

4.2.4 Estimation

I create a dichotomous variable, **correct response**, which represents the accuracy of news evaluations. Correct response means that one labels false stories as false and true stories as true. I calculate the mean correct response for the full sample or subgroups, and in some cases, separately for true and false stories. In some analyses, I calculate covariate-adjusted marginal means from linear regressions of the following form:

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

where i indexes respondents, and s indexes news stories, C is correct response, V is the variable of interest (e.g., a measure of media consumption), X is a vector of controls that may include age, gender, higher education, the date of the survey, and story features such as the political direction and order in the quiz. Heteroskedasticity-robust standard errors are clustered on the respondent level. In certain models, I also include interactions between respondent-level characteristics (presidential approval or media usage) and the

[34]The number of decisions on news veracity from the 2020 survey analyzed in this chapter is substantially larger than in the previous chapter because the analysis in the previous chapter was limited to respondents who were asked about presidential approval and provided their response to that question.

features of news stories.

Models in the main text do not control for news sources that were assigned to stories in the experiment, as that would have required me to drop several messages that were not a part of the experiment. Tables G12, G13, and G14 in the appendix show that the results are virtually unchanged when the models control for randomly assigned sources.

4.3 Findings: How Well Do Russians Discern False News?

4.3.1 The Overall Accuracy of News Evaluations Is Poor

Figure 4.1 reports the average accuracy of evaluations in the 2020 and the 2019 surveys, first for all news stories pooled together; these estimates are intercepts from regressions without any covariates. Here and below, the estimates are multiplied by 100 for ease of presentation. Table G5 in the appendix reports the regression models.

In both surveys, the overall accuracy was close to 50 percent. The average accuracy rate for two surveys was, in fact, just 51 percent—not much better than if respondents answered completely at random.

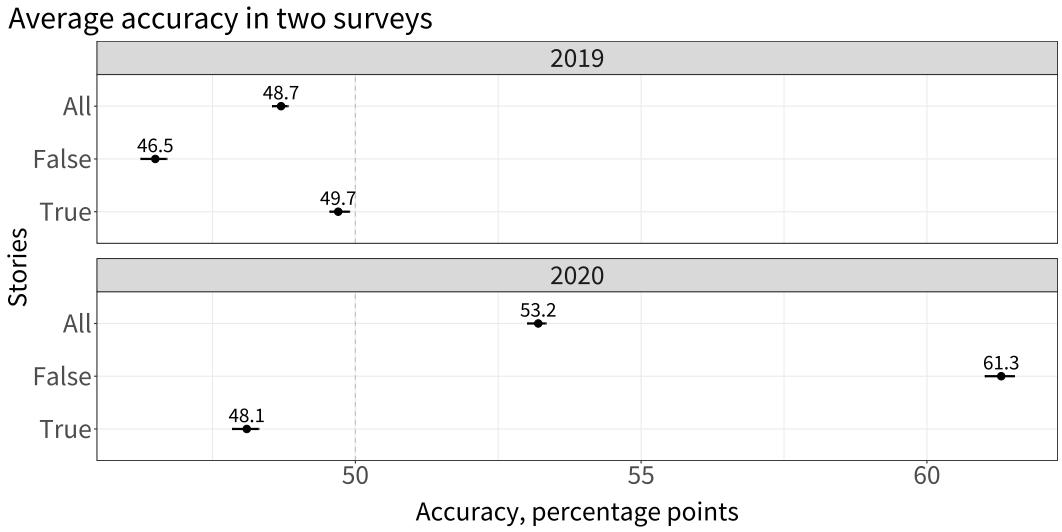

Figure 4.1: The percent of respondents that correctly recognized news stories as false or true. The estimates are coefficients and 95% confidence intervals from linear regressions

In Table G5 (Columns 3 and 4), I also show that the average accuracy with respect to politically neutral stories was 47 percent in 2019 and 54 percent in 2020,[35] which is quite similar to the mean accuracy discussed above. The similarity suggests that the overall poor performance is not an artifact of the set of political stories in the survey or of the distribution of political beliefs in the sample, as the evaluations of neutral stories should not be affected by such factors.

These findings cast doubt on the argument that living in an authoritarian environment and continually experiencing state propaganda may inoculate one against false information. To put my results into perspective, in several large recent studies on this topic in various democratic countries, respondents correctly evaluated news stories in about 55–65 percent of cases (Guess et al. 2020; Lyons et al. 2021; Arechar et al. 2022)—more often than in my surveys. While my research design may be somewhat different from these studies, it is unlikely that this design somehow substantially impaired the respondents' judgment. Russians thus have not demonstrated a stronger capacity to discern falsehoods compared to citizens in more democratic states.

Further, I compared the results for individual stories in the main study and in the additional survey via the polling firm OMI where the sample was more similar to the population at large than my main social media sample (see above and in the appendix). In the OMI survey, respondents evaluated four messages from the main study in the same month that the main study was conducted. Table 4.1 shows the accuracy rate for each story in both surveys.

In the OMI sample, accuracy was lower with respect to every story, even though the stories in the OMI survey were presented in a somewhat extended form—that is, respondents had more information at their disposal to make a judgment. The lower accuracy may be explained by the less sophisticated sample in the OMI survey and/or by the difference in

[35]The estimates are coefficients from no-intercept regressions of correct response on dummies for story types.

study design, as the quiz format in the main study incentivized accuracy. In either case, this comparison suggests that in everyday news consumption, ordinary Russians may possess even less capacity to distinguish between true and false stories than I have found in the main study.

Table 4.1: Accuracy rate in the main study and the OMI survey, by story

	Survey	
Story code	Main study	OMI
107	52.0	50.1
110	57.0	51.1
111	57.4	48.0
205	39.3	23.5

Note: The percent of respondents in the main study (2020 survey) and the OMI survey that correctly recognized news stories as false or true. For story texts, see the appendix.

It is also interesting that in the aforementioned recent work on detecting misinformation in a variety of countries (Guess et al. 2020; Lyons et al. 2021; Arechar et al. 2022), as well as in a recent study of Russian disinformation in Ukraine (Erlich and Garner 2021), accuracy was typically higher with respect to false stories. As Figure 4.1 shows, I was able to replicate this pattern in 2020, but in the 2019 survey, the accuracy was somewhat higher with respect to true stories. The accuracy rate for true stories was, however, similar in both surveys.

The difference in accuracy for false stories may have resulted from a different sample composition: Controlling for story features and individual characteristics, the sample-average accuracy was still almost 2 percent higher in 2020. At the same time, in 2019, the accuracy was very similar in the subsamples recruited from different social media platforms, Facebook and VK, even though these two subsamples were quite different in terms of age, education, media usage, and probably other characteristics. The discrepancy could also be a consequence of a different story selection, although the 2020 survey included six false stories from the 2019 survey, and the accuracy with respect to these stories was 6 percentage points higher in 2020 than in 2019.

Regardless of the specific reasons for the difference, it is important to emphasize that false stories are not always more recognizable than true stories. In itself, that is a concerning finding.

4.3.2 State Media Consumers Are Less Accurate

Next, I consider whether the accuracy of news assessments depends on respondents' media consumption. Figure 4.2 compares the performance of different groups of media consumers. The plotted estimates are the coefficients from regression models of correct response on media usage categories, and they are relative to the reference category—respondents who reported not using either propaganda outlets or independent media. This group was chosen as the baseline category because it was the most neutral one in terms of media consumption; most respondents in this group either did not follow any particular news sources or relied on news aggregators.

The underlying regression models control for various other respondent-level and story-level characteristics, as reported in Table G6 in the appendix. All regressions here and below also control for the date of the survey, the order of the story in the quiz, for the story's placement in the first or the second quiz.

As the left panel in the figure shows, Russians who indicated consuming primarily state media, especially state television viewers, were several percentage points less accurate in their assessments compared to the reference group, whereas consumers of critical (independent) media were several percentage points more accurate relative to the reference category. The difference in accuracy between consumers of state television and consumers of critical media was quite sizable—about 7 percentage points in the 2020 survey and more than 11 percentage points in the 2019 survey. In the OMI survey, this difference was even larger (Table G6), although that larger magnitude was partly driven by the selection of stories, as suggested by an analysis of the main data set limited to the four stories that

were included in the OMI survey (Column 5 in the same table).

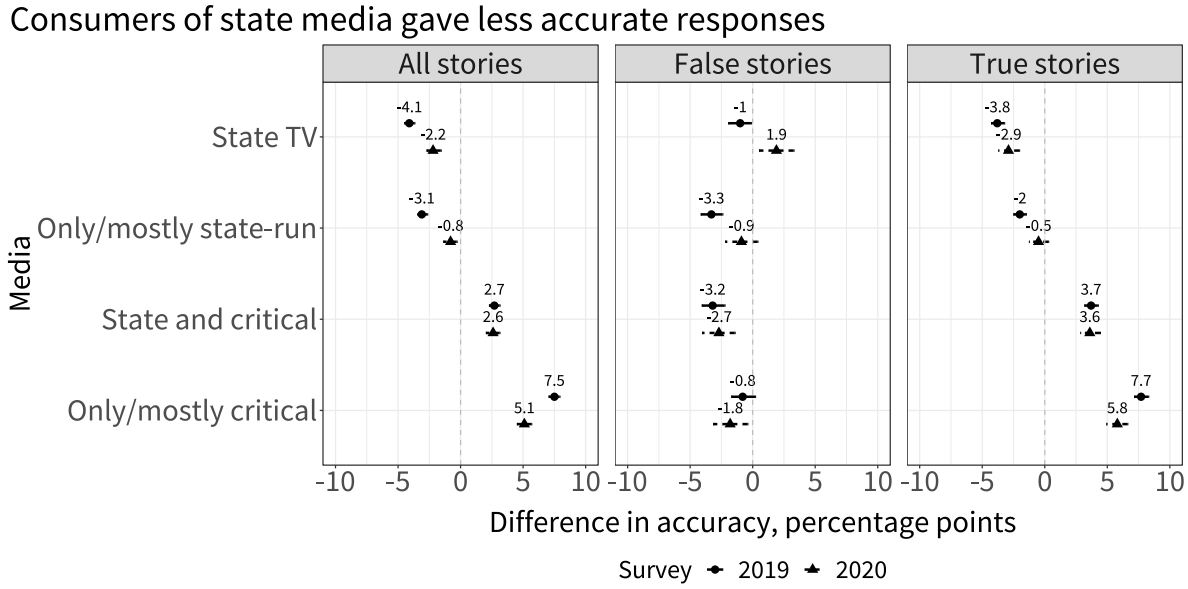

Figure 4.2: Differences in accuracy rates for various groups of media consumers, compared to the reference category: those who use neither state-run nor independent media. The estimates are coefficients and 95% confidence intervals from linear regressions of correct response on media usage and covariates.

These results, again, dispute the common belief that exposure to authoritarian propaganda can make citizens more discerning.[36] Whether consumers of propaganda media are generally more skeptical than other citizens, my analysis does not provide a clear answer. If one is indiscriminately skeptical about news, this person would detect false stories better but recognize true stories less often. As the remaining panels in Figure 4.2 show, propaganda consumers indeed evaluated true stories less accurately in both surveys, but there was no consistent pattern with respect to false stories. In 2020, state media consumers were somewhat ahead of other media consumers in recognizing falsehoods. However, in 2019, consumers of state TV and consumers of critical media both evaluated falsehoods less accurately than respondents who indicated using neither of these kinds of media outlets. In either survey, propaganda consumers' lower accuracy with respect

[36]This analysis does not necessarily posit a causal relationship between the consumption of propaganda and the capacity to evaluate news stories. However, my results suggest that if this relationship is causal, it is not a positive one.

to true stories was not fully compensated by their higher accuracy with respect to false stories—that is, their skepticism was generally detrimental, not helpful, to their overall performance.

It is worth noting though that consumers of state media were no more than a few percentage points behind those respondents who used more neutral sources or no news sources at all. This finding may be a relief: Even if exposure to propaganda is detrimental, it does not dramatically undermine one's general capacity to distinguish between true and false messages. However, as I will discuss below, the consumption of state media may be more consequential when it comes to evaluating propagandistic or other politicized messages.

Another interesting finding is that citizens who consumed ideologically diverse media—both state and critical news outlets—were not especially accurate in their evaluations. When evaluating true stories, this subgroup was more successful than consumers of propaganda but less successful than those who consumed only critical media. With respect to false stories, respondents who consumed more diverse media performed somewhat worse than most other groups. Thus, a recommendation to diversify the consumption of political media may not be helpful in an authoritarian country like Russia where such diversification could mean greater exposure to false propaganda narratives.

Finally, it mattered little whether respondents knew and used many different news sources. As Table G7 shows, the most active media consumers—those who indicated using 5 or more different news sources—performed only 1–2 percentage points better compared to those who relied on fewer news organizations.

4.3.3 All Citizens Are Vulnerable to Like-Minded Misinformation

Above, I have suggested that evaluating political content accurately may be especially difficult because individuals tend to treat like-minded information more favorably and dis-

count incongruent information. Such biases could result in a stronger ability to recognize politically incongruent false stories but higher vulnerability to like-minded falsehoods, and vice versa with respect to like-minded or incongruent true stories. I have also discussed the possibility that, given the ubiquity and familiarity of the Kremlin's propaganda, Russians would be capable of detecting false propaganda messages regardless of their political dispositions. However, the evidence in this section is consistent with the first rather than the second possibility.

I calculated the average accuracy for Putin supporters and critics with respect to three categories of news content: politically congruent, politically incongruent, and politically neutral. This categorization is based on whether news stories were consistent or inconsistent with propaganda narratives. For Putin supporters, pro-regime stories would be politically congruent, and critical (propaganda-inconsistent) stories would be incongruent. For Putin critics, critical stories would be politically congruent, and pro-regime stories would be incongruent.

Figure 4.3 plots accuracy rates by story type. The results reported here and below are from the 2020 survey, as presidential approval was not measured in the 2019 study. The average accuracy is calculated directly from survey responses without adjusting for other covariates.

Putin supporters and critics performed similarly when evaluating politically neutral stories. Supporters gave somewhat more accurate guesses with respect to false stories and somewhat less accurate guesses with respect to true stories. This may reveal a pattern of skepticism similar to the one observed among consumers of state media, but here, skepticism was not detrimental, and on average, supporters performed as well as critics.

However, both groups were substantially more vulnerable to like-minded falsehoods than to politically incongruent false stories. The accuracy rates were around 55–60 percent for politically congruent misinformation but about 70–75 percent with respect to incon-

gruent falsehoods. At the same time, all respondents were overly skeptical about true politically incongruent news stories, and as a result, they performed rather poorly when evaluating such messages. Critics correctly recognized such stories 48 percent of the time, and supporters just 28 percent of the time.

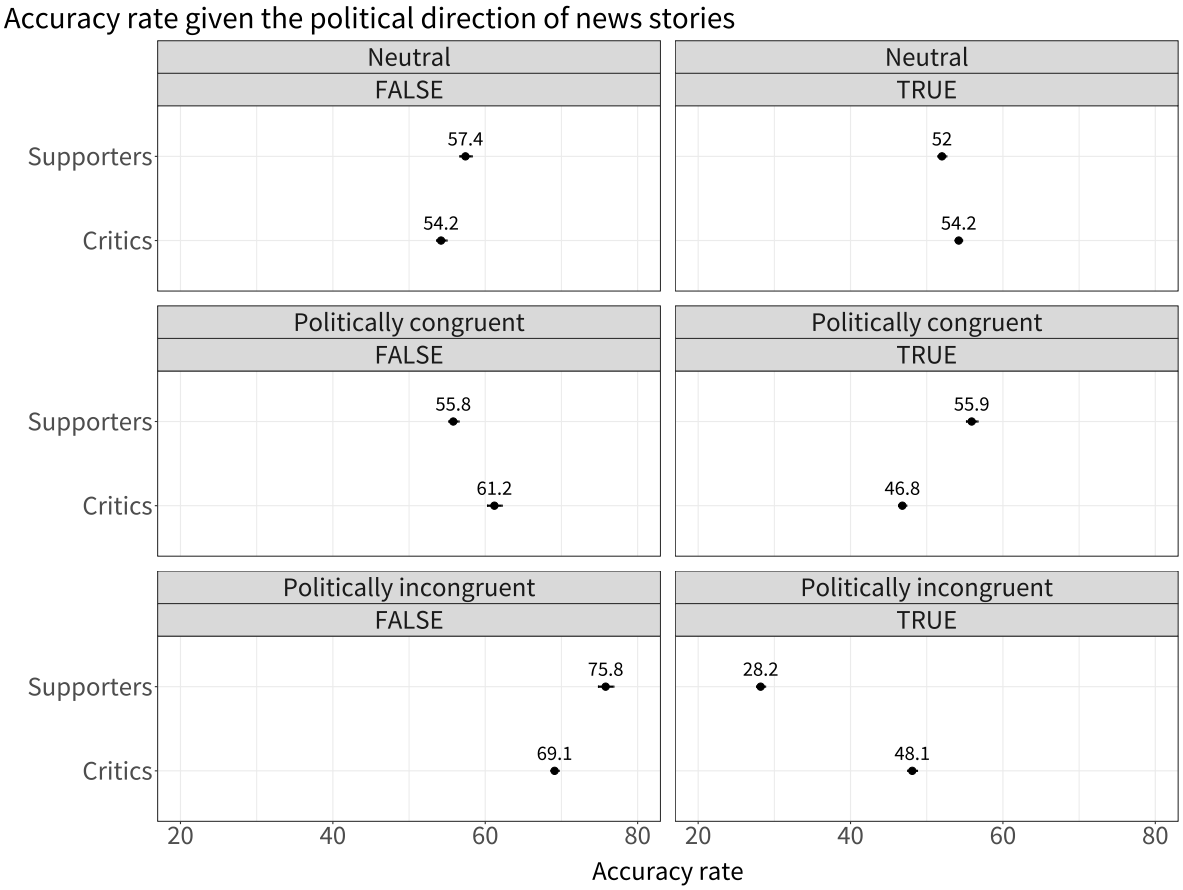

Figure 4.3: Accuracy rates for Putin supporters and critics given the characteristics of news stories. Differences and 95% confidence intervals calculated from the 2020 survey data.

In other words, political biases prompt large differences in accuracy between Putin supporters and critics with respect to pro-regime or critical stories. To illustrate these differences, I estimated a linear regression of correct response on the interaction between the presidential approval dummy and the characteristics of news stories, controlling for individual characteristics (Table G8 in the appendix); then, I calculated the differences in mean accuracy between supporters and critics with respect to true and false pro-regime

or critical stories via the R package *emmeans* (Lenth 2019).

Figure 4.4 reports the differences in accuracy rates; a positive estimate means that pro-Putin respondents were more accurate when assessing news stories in a particular category, and a negative estimate means that pro-Putin respondents performed worse compared to opposition-minded respondents.[37] First, I consider the results regardless of media usage (the estimates in gray).

As for pro-regime stories, Putin supporters were 10 percentage points more accurate when these stories were true but 11 percentage points less accurate when these stories were false. As for critical (propaganda-inconsistent) stories, the differences were even larger. Putin supporters were 16 percentage points more likely to correctly identify false critical stories but 17 percentage points less likely to correctly identify true critical stories.[38]

These results demonstrate that in some cases, individual biases may help to distinguish between true and false stories, but in other cases, they prompt citizens to reject true information and accept falsehoods. In authoritarian regimes, false stories largely come from state media and reflect pro-regime narratives. Consequently, in such environments, a bias against pro-regime information helps opposition-minded citizens to better recognize the lies of propaganda. On the other hand, government supporters are worse off, as their pro-regime bias increases the chance that they would fall for false propaganda or incorrectly reject true critical messages about the regime.

The gaps in accuracy were even larger between regime supporters and critics who got their news from like-minded media—that is, Putin supporters who used only or mostly state-run media and Putin critics who used only or mostly critical, independent media.

[37] Note that the contrasts plotted in Figure 4.4 are not exactly the same as the differences in subgroup means presented in Figure 4.3, as the estimates in Figure 4.4 are adjusted for covariates.

[38] These results are consistent across individual stories. As Table G2 in the appendix shows, Putin supporters were less likely to believe all critical (propaganda-inconsistent) messages, regardless of whether these stories were true or false, whereas Putin critics were less likely to believe all pro-regime (propaganda-consistent) messages. Analogous differences in accuracy between Putin supporters and critics also exist in the broader population, as the results from the OMI survey suggest (Figure G2 in the appendix).

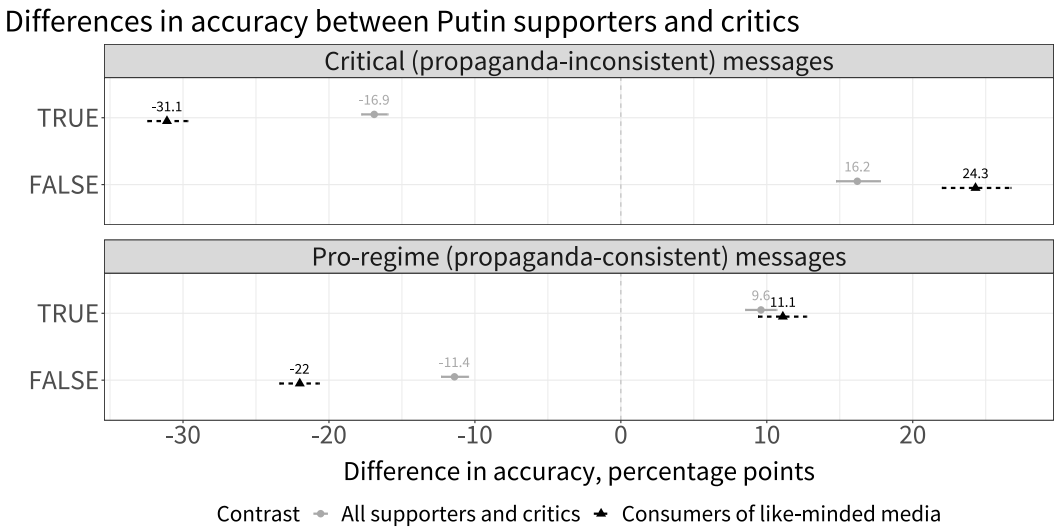

Figure 4.4: Differences in accuracy rates between Putin supporters and critics: either between all supporters and critics (in gray), or between supporters who use state media and critics who use independent media (in black). Differences and 95% confidence intervals calculated from linear regressions of correct response on subgroup dummies, story direction, story type (true or false), and covariates. Results from the 2020 survey.

These estimates, shown in black in Figure 4.4, are estimated from linear regression models of correct response on subgroup dummies that capture regime support and predominant media usage; these dummies interacted with story features (see Table G9 in the appendix).[39]

Putin supporters who primarily relied on state media were 22 percentage points less likely to identify correctly false propaganda stories and 31 percentage points less likely to correctly identify true critical messages, compared to Putin critics who relied on independent media. At the same time, pro-Putin state media consumers were 24 percentage points more likely to identify accurately false critical stories.[40]

These stronger disagreements may emerge because citizens who rely on like-minded news outlets shield themselves from politically incongruent statements and allow themselves to become even more used to congruent messages. It is also possible that like-minded media usage is itself a consequence of stronger political beliefs, which also pro-

[39]Figure G3 in the appendix shows the mean accuracy rates for respondents who use like-minded or incongruent media.

[40]As Figure G3 suggests, respondents who used incongruent media were less prone to error with respect to false like-minded stories but less successful with respect to false incongruent stories.

duce starker disagreements about news messages. This analysis does not posit a particular causal explanation. However, it is important to note that the patterns I describe are quite common in the real world. For example, about 60 percent of Putin supporters in my data—even in the social media sample—got the news only from state-run media. Thus, many pro-Putin individuals in the population are most likely very vulnerable to pro-regime falsehoods but very resistant to the critical reporting of independent media.

4.3.4 Small Differences in Accuracy Given Age and Education

There were only minor differences in accuracy depending on age and education. Figure 4.5 shows that on average, most age cohorts performed similarly (see Table G10 for regression models).

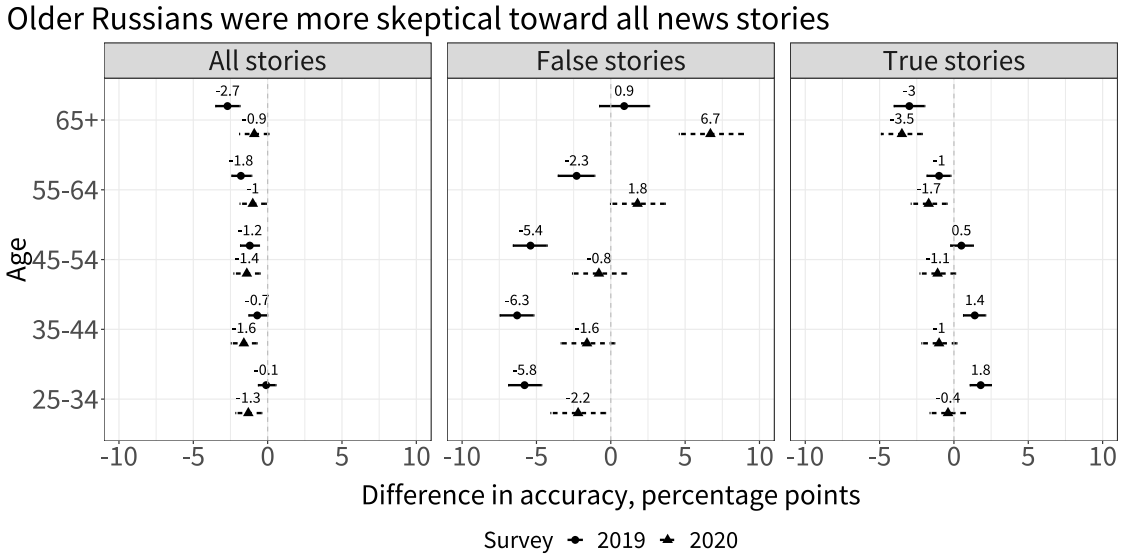

Figure 4.5: Differences in accuracy rates depending on age, compared to the reference category: age 18-24. Coefficients and 95% confidence intervals from linear regressions of correct response on age and covariates.

Older respondents—those over the age of 55—were more likely to judge any news stories as false, which resulted in better results with respect to false stories but worse results with respect to true stories. Since the analysis controls for media usage, this skepticism is not simply a reflection of the propensity of older citizens to consume state media. It could be

that older citizens have learned to be more skeptical about news messages because of past exposure to communist propaganda.

However, this pattern was not reproduced in the OMI survey and in the analysis of the main survey limited to stories included in the OMI survey (Columns 5 and 6 in Table G10). Thus, if older Russians are skeptical about news information, this skepticism is not universal—it is conditional on the content.

As for education, my results are consistent with the conventional expectation that more educated citizens process news more carefully (Figure 4.6). Interestingly, this overall more positive result was driven by responses about true stories: College-educated respondents gave *less* accurate evaluations of false stories.

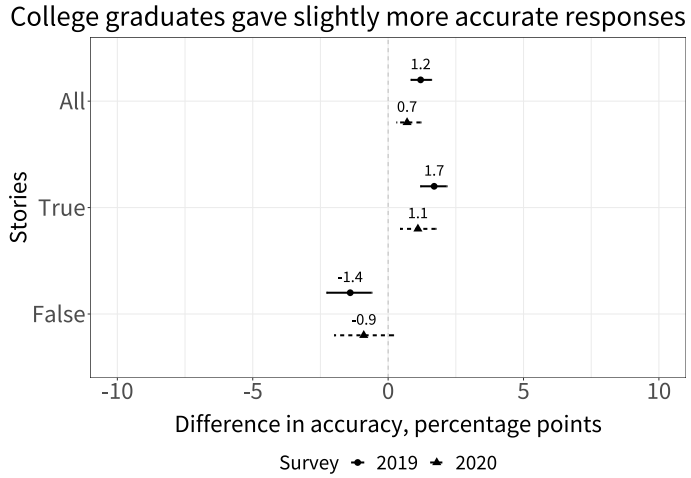

Figure 4.6: Differences in accuracy rates depending on whether a respondent has a college degree. Coefficients and 95% confidence intervals from linear regressions of correct response on education and covariates

However, the difference between respondents with and without a college degree was very small, just about 1 percentage point. Given that the main study sample was recruited from social media, it could be that higher education does not bolster the quality of information processing much above the capacity that citizens already need to possess to be active online.

In the OMI sample—where fewer respondents were active social media users—college

graduates were 5 percentage points more likely to give accurate answers (Table G11). This difference, as in the analysis of media usage above, is partly due to the set of stories included in the OMI survey. When I limited the analysis of the main study to these stories, college-educated respondents performed 3.5 percentage points better. But the larger magnitude of the coefficient in the OMI study still suggests that in a less media-savvy population education may be a more important factor.

4.4 Discussion

The most important predictors of accuracy were whether citizens were biased toward or against the political direction of news stories and whether these individuals regularly used state-run or independent media. The intensity of one's political biases—that is, how strongly one supported or opposed the regime—could also improve or undermine one's capacity to recognize falsehoods, depending on whether these falsehoods were politically congruent (Figure G4 in the appendix).

Other variables considered in this analysis were not as strongly associated with higher accuracy of evaluations, although such factors as age and education may have improved on or exacerbated the impact of political biases. For example, pro-Putin consumers of state media over 55 years old without a college degree recognized false propaganda stories only 49 percent of the time, whereas opposition-minded consumers of critical media under 55 recognized these falsehoods 76 percent of the time.[41] In the 2019 quiz, which did not measure presidential approval, consumers of state media over 55 without a college degree recognized false propaganda stories in 40 percent of cases, whereas college-educated consumers of critical media under 55 detected such falsehoods in 75 percent of cases.

It is worth noting that overall, the accuracy rate with respect to false propaganda messages was still higher than the sample-average accuracy or even than the average

[41] In this subgroup, there was no difference between respondents with and without a college degree.

accuracy with respect to all false stories. The mean accuracy for propaganda falsehoods was 63 percent in the 2020 survey and 56 percent in the 2019 survey, whereas the mean accuracy for false stories in these two surveys was 61 and 47 percent, respectively.

State media consumers, especially Putin supporters, were, of course, more vulnerable to propaganda falsehoods, but even they were not completely blind to such falsehoods. Consumers of state news outlets identified false propaganda stories 55 percent of the time in the 2020 survey and 46 percent of the time in the 2019 survey. This suggests that citizens who are biased in favor of propaganda stories still retain some critical capacity.[42]

While citizens, especially regime supporters and propaganda consumers, could be too receptive to false pro-regime stories, the respondents were also too skeptical with respect to true critical (propaganda-inconsistent) messages. In the 2020 survey, the average accuracy for true critical stories was just 39 percent, and it was about 51 percent in the 2019 data. In other words, many respondents did not find such stories believable. Even opposition-minded consumers of independent media, who should be biased in favor of critical messages, recognized such stories correctly only 57 percent of the time (Figure G3, 2020 data). In the 2019 survey, consumers of critical media recognized true critical stories 64 percent of the time.

It could be that critical stories are encountered too infrequently in an authoritarian media environment, and they may appear less plausible against the background of the dominant propaganda narratives to which even regime critics are exposed. This indicates a problem for independent news organizations in autocracies: Despite all their efforts to promote the truth, too many citizens, even those who dislike the government and consume critical media, would be skeptical about that truth.

[42]This pattern is not unique to propaganda consumers, however: e.g., in the 2020 survey, respondents who relied on critical media recognized propaganda-inconsistent falsehoods 56 percent of the time.

4.5 Conclusion

This chapter has examined how well citizens distinguish between true and false stories in an autocracy where the information environment is dominated by state propaganda. And the answer is alarming: Citizens perform quite poorly. The overall accuracy of judgments about news in my surveys, based on several diverse samples of Russians, was close to guessing at random. Moreover, while the literature on autocracies often posits widespread skepticism among citizens, my data do not support this argument. If citizens were highly skeptical about news information, they would often fail to recognize true stories, but they would at least successfully detect false stories. Respondents in my surveys did not identify either group of messages very accurately—they were neither discerning nor overly skeptical. Additional evidence from the OMI survey suggests that the quality of news processing may be even lower in the broader Russian population. Thus, citizens in such environments are probably quite vulnerable to information manipulation.

One consolation in these overall bleak findings is that certain groups of citizens possess a higher capacity to detect false stories and to distinguish true messages from misinformation. College-educated respondents and consumers of independent, critical media in my surveys evaluated news stories more accurately. Older citizens were somewhat more skeptical about news evaluations, which meant they identified certain false stories more accurately.

Moreover, citizens could be predisposed to detect certain false or true stories better because they are politically biased against or in favor of such messages. In fact, the political congruence of news stories was the most important predictor of accuracy in news evaluations. Political dispositions do not determine one's general ability to discern falsehoods, but they can make one more resistant to certain types of false news. In particular, opposition-minded citizens were quite capable of detecting pro-regime falsehoods. This tendency gives them an advantage given that false stories in autocracies are more likely to

be pro-regime (and to come from state propaganda outlets).

However, all groups of respondents were also highly vulnerable to politically congruent news content. From a practical standpoint, regime supporters' vulnerability to false propaganda is especially dangerous, but opposition-minded citizens were also quite susceptible to false critical stories. The latter tendency may foster the spread of anti-regime rumors that could threaten authoritarian stability (Huang 2015a). Political biases thus appear to have a universally detrimental impact on falsehood recognition, and this is consistent with recent work on biased reasoning in democracies (Ditto et al. 2018).

One possible direction for future research is to examine a broader set of individual and story-level factors that may affect the discernment of misinformation. For example, it is worth investigating to what extent the differences in accuracy between consumers of state and critical media may be explained by the differences in cognitive style or capacity (Pennycook and Rand 2019b).

Further, it is important to understand whether news literacy interventions help citizens in authoritarian regimes to recognize misinformation and whether such interventions improve the quality of news processing. Recent attempts to teach citizens in different democracies to recognize false news 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 themselves develop to discern different kinds of falsehoods.

Conclusion: The Power and Dangers of Affirmation Propaganda

Propaganda and disinformation are widely used by many authoritarian leaders, and so it is crucial to study how autocrats can deploy these tools, how effective their information manipulation can be, and what its limitations are. In this dissertation, I have demonstrated that there is surprising trust in media and state propaganda in autocracies, and that regime support is an important driver of this trust. I have developed a theory of affirmation propaganda—a strategy that autocrats can use to maintain a connection to their supporters instead of trying to win over new sympathizers. This strategy also allows governments to improve trust in propagandistic state media by emphasizing belief-affirming messages. Based on three original surveys conducted in Russia, I have shown that many pro-regime citizens find state-run media accurate and trustworthy and that they trust such propaganda outlets more than independent news organizations. Moreover, regime supporters, especially consumers of state media, are very vulnerable to the regime's disinformation.

As Russia's recent experiences suggest, affirmation propaganda can be quite successful. During Russia's invasion of Ukraine in 2022, the Kremlin-controlled state media went into overdrive trying to justify the war and present Russia as a liberating force. Television depicted the Ukrainian president Vladimir Zelensky and his government as a gang of drug-addicted Nazis (Zelensky is Jewish) who were preparing to unleash genocide against Russians using genetically modified viruses. The Kremlin's propagandists blamed every

atrocity committed by the Russian army—cities that were shelled, children that were killed, women that were raped (Saito 2022)—on Ukrainians themselves. Huge losses and setbacks that the Russian army suffered simply did not exist in this picture. And as Western sanctions started to cripple the Russian economy, propaganda chanted that these sanctions were making Russia stronger, freer, and more independent.

Despite the absurdity of these claims, a large portion of the Russian public, at least when the war began, seemed to believe the Kremlin. In everyday conversations, ordinary Russians repeated propaganda claims about "Nazis" in Kyiv and the necessity of the invasion, and some started wearing symbols of support for the war. In April 2022, only 7 percent blamed Russia for the deaths of Ukrainian civilians, and 74 percent blamed the West or Ukraine.[43] Astonishingly, in phone calls with Ukrainian relatives, some Russians denied the attacks on Ukrainian cities, choosing to believe television over their family members (Hopkins 2022).

How could absurd, implausible propaganda become so influential? The theory of affirmation propaganda developed in this dissertation and the evidence that I provided above help to demystify the power of Kremlin's manipulation. For years, Putin's domestic propaganda machine amplified the anti-Western sentiment and Soviet nostalgia, already widely shared by Russians. Thus, propaganda targeted the portion of the public that did not require much persuasion. The focus on familiar narratives allowed state media to maintain certain credibility and to "sell" Russians new accusations against Ukraine—that social revolutions against corrupt pro-Russian leaders had been staged by the CIA, or that the Ukrainian government was discriminating against "ethnic Russians." The myth of "Ukrainian Nazis" was tied to the existing cult of Russia's victory in World War II and the entrenched belief that the Ukrainian nation was an artificial construct. Exploiting

[43] https://www.levada.ru/2022/04/28/konflikt-s-ukrainoj-i-otvetstvennost-za-gibel-mirnyh-zhitelej/. Given the unreliability of public opinion surveys in the time of war, repression, and military censorship, we should treat with caution any reported numbers on those who believed propaganda or supported the war. But all existing evidence suggests that it was a very substantial share of the Russian population.

these prior beliefs, affirmation propaganda helped the government to drum up the anti-Ukraine sentiment and support for the war, introducing new false accusations as soon as the previous ones were absorbed and adopted by the public.

Affirmation propaganda had not necessarily been a deliberate, strategic choice from the very beginning. It is possible, for example, that Putin's propagandists had at some point realized that the audience responded especially well to anti-Western appeals or the depictions of Russia's glorious past, and they started to gradually incorporate such messages into their reporting. As time went on, propaganda deployed such tactics more and more intentionally, especially after the annexation of Crimea, which appeared to invoke deep pro-state and pro-regime sentiment among many Russians (Greene and Robertson 2020).

The deployment of belief-affirming tactics may also explain the successes of other propaganda strategies and tactics. For example, Rozenas and Stukal (2019) outline a tactic of blame-shifting that the Kremlin's media have used for decades: Whenever the economic situation deteriorated, propaganda attributed these problems to the failures of international markets or to the work of Western adversaries. However, if such false attribution has indeed been effective, it is probably because the Russian public had already been predisposed to blame the West for its troubles.

The theory of affirmation propaganda also makes it clear why saying that Russians were "brainwashed" into supporting the war with Ukraine (Hurley 2022) is a mischaracterization. The Kremlin's propaganda has successfully identified and exploited a set of ideas, beliefs, and symbols that Russians were already comfortable with. But these beliefs and dispositions also constrained the Kremlin in what it could impose on the public. In fact, the theory of affirmation propaganda implies a greater role of the public than some other theoretical accounts that treat propaganda primarily as strategic manipulation by leaders. Moreover, there is some evidence that the Kremlin understood such limitations.

In a story published by the independent outlet *Meduza* in April 2022, Kremlin insiders lamented that the Russian public was too belligerent to accept a negotiated peace with Ukraine, and they doubted that their propaganda could sell such a negotiation to the pro-Putin majority (Pertsev 2022).[44] My analysis of affirmation propaganda thus contributes to the work on the constraints on authoritarian media manipulation (Bleck and Michelitch 2017; Rosenfeld 2018). It also highlights a tension between the mobilizing effects of belief-affirming and identity-reinforcing tactics, on the one hand, and the goal of demobilizing and depoliticizing the public, which many autocrats pursue (Croke et al. 2016).

Another important constraint is that citizens still retain some critical capacity even as propaganda tries to exploit their prior beliefs. In my analysis of false news detection above, for example, Putin supporters were able to recognize propaganda falsehoods about 56 percent of the time. They were, of course, much more vulnerable to such falsehoods than opposition-minded Russians, but supporters could still resist propaganda to some degree.

Autocrats may understand that even their supporters would not wholeheartedly believe everything that propaganda says. But their goal is probably less ambitious. Rather, belief-affirming tactics could be employed to ensure the general plausibility of propaganda, to give pro-regime citizens enough so that they do not question the overall narrative.[45]

It is also worth keeping in mind that affirmation propaganda alienates the opposition. In my analysis, very few of Putin critics evaluated state media outlets as accurate, objective, or politically independent. Regime critics were also quite unlikely to believe pro-regime stories, even if these stories were true. As a result, when the war against Ukraine started, messages by state media or government officials were met with overwhelming disbelief

[44]We should be mindful of the possibility that bureaucrats simply tried to shift the blame for the war to the Russian society. Still, this was a clear admission that propaganda could not impose a narrative on the public if the public was not amenable to that narrative.

[45]This may be in contrast with the goals of authoritarian propaganda abroad. For example, the Kremlin's foreign propaganda machine, *RT*, aimed to make citizens of democracies more skeptical and doubtful, to challenge the mainstream narratives in their societies (Yablokov 2015). *RT*'s slogan was: "Question More."

among opposition-minded Russians, especially those who consumed independent media.

To counteract some of these constraints, autocrats can deploy other, related propaganda strategies. Scholars have suggested, for example, that one of the goals of authoritarian propaganda is to confuse citizens, to make them uncertain about the existence of objective truth (Deibert et al. 2010; Walker and Orttung 2014; Pomerantsev 2015). There is evidence of such confusion in my findings: Regardless of political dispositions or media usage, Russian respondents in my surveys in general did a poor job distinguishing between true and false stories. Maintaining the engagement of core supporters via affirmation propaganda and making the rest of the public doubt everything would be an advantageous situation for autocrats. However, in this case, there is also a risk that pro-regime citizens would too become confused or overly cynical, and that could undermine the work of propaganda.

Affirmation Propaganda in Different Authoritarian Regimes

Propaganda that involves belief-affirming tactics is not universally applicable. As my theory suggests, it requires a strong political or ideological connection between the pro-regime majority and the ruling party or the leader, as well as a politically distant opposition. If these conditions are not in place, affirmation propaganda may not be as effective. In addition, if the pro-regime majority is rather small, autocrats may prefer other propaganda strategies that allow them to appeal to a broader subset of the public.

Some autocratic regimes that do not conform to these conditions—e.g., the pro-regime majority is small, amorphous, or unstable—thus place more emphasis on repression or, say, economic growth, and they use milder propaganda tactics.[46] However, there are also regimes where, like in Russia, the conditions for affirmation propaganda exist. These regimes feature a popular leader with a stable support base, such as Recep Tayyip Erdoğan

[46] In the first years of Putin's rule, when Russia experienced fast economic growth, the Kremlin did not extensively use affirmation propaganda, often relying more on its technocratic credentials. The use of belief-affirming tactics intensified when the economic development started slowing down.

in Turkey or Viktor Orbán in Hungary, and there is substantial political polarization in these countries (Laebens and Öztürk 2020). Thus, using affirmation propaganda could be more effective for such authoritarian regimes than attempting to get through to the other side via persuasion. Future work may investigate to what extent leaders such as Erdoğan or Orbán rely on affirmation propaganda.

Using belief-affirming tactics also does not imply that the regime is a purely "informational autocracy." Affirmation propaganda can be deployed together with repression against the opposition. An example of such a regime may be Nazi Germany. Russia in the early 2020s, especially after the invasion of Ukraine, also shifted in this direction. The main requirement for affirmation propaganda to be successful in such circumstances is that the pro-regime majority remains large and stable.

The Future of (Affirmation) Propaganda in Russia

The key role of affirmation propaganda is to maintain the pro-regime majority and prevent its erosion. After two decades of Putin's rule and after the invasion of Ukraine, one of the crucial questions for the Russian regime is whether affirmation propaganda tactics could still play that role going forward, given the looming economic crisis and the country's increasing international isolation.

At the moment of writing, there has been little evidence of affirmation propaganda losing its appeal. Thus, it remains possible that the Putin regime maintains the substantial core group of supporters via belief-affirming tactics for a few more years, in the meantime extending repression to prevent the opposition from gaining strength. Appealing to the opposition in these circumstances is unlikely to be optimal, which my analysis of the experimental results in Chapter 3 also suggests.

If, however, the pro-Putin majority starts to crumble as a result of repression, war losses, or other failures of Putin's government, affirmation propaganda can quickly become

detrimental, rapidly alienating the former supporters now breaking away from the regime. In such a scenario, Putin could follow the route of the Belarusian dictator Alexander Lukashenko. By 2020, after mass protests against Lukashenko and a fraudulent presidential election, the viewership of Belarusian state television, which, as in Russia, had been the main propaganda vehicle for the regime, plummeted (Greene and Lyubimtseva 2020). Further escalating repression became Lukashenko's only option.

Facing a decline in public support, the Russian leadership might, theoretically, try to preempt the Belarussian scenario by shifting to a different kind of propaganda, which more often acknowledges the reality and attempts to speak to regime opponents, at least moderate ones. There are, however, reasons to doubt that such a strategic shift could be successful in the Russian case.

As I have noted above, using affirmation propaganda tends to lock the regime into this strategy because it gradually destroys any remaining perceptions of the plausibility of state media among non-supporters. Once the opposition-minded citizens deem state media untrustworthy, it is very difficult to change their minds, especially if such attempts are made during an unfolding political or economic crisis. In addition, reorienting the propaganda apparatus from belief-affirming tactics toward more complex strategies may not be a trivial task.

But even if the regime reshapes its propaganda, such change would still be risky. With an updated, less "affirming" propaganda strategy, which is less attractive to the core support base, the government may be losing existing supporters faster than it would be winning new ones. Thus, a change in strategy could accelerate the regime's downfall.

Other Research Directions

This dissertation has examined an important propaganda strategy that is attractive to a certain type of autocrats. It has also outlined the conditions under which this strategy could

be more or less effective, compared to other forms of information manipulation. It is worth further investigating the role of affirmation propaganda in the toolset of contemporary autocrats. How can they combine this strategy with other propaganda tools? Under what conditions do they switch between affirmation propaganda and other strategies? Are such shifts dramatic or gradual? Is it possible to maintain relatively moderate belief-affirming tactics that do not involve blatant disinformation and complete alienation of regime critics? Is affirmation propaganda more effective with respect to some issue dimensions than others? What kinds of messages are more likely to be used for belief affirmation purposes, and what particular work do these messages do in the context of authoritarian propaganda? Does affirmation propaganda exploit certain psychological traits such as conformism (Greene and Robertson 2017)?

Another important direction of future research, building on the current findings, is to study the factors or interventions that can improve citizens' capacity to resist propaganda and motivate them—especially regime supporters—to consume news more thoughtfully. Can news literacy interventions and techniques tested in other contexts be helpful against authoritarian disinformation? How do we teach citizens of autocracies to be more skeptical and discerning, given that autocrats have incentives and resources to prevent such interventions? How can we alert citizens to the bias of state propaganda outlets or incentivize them to seek independent media without invoking a backlash driven by political biases?

To start answering these questions, we also need to look to individuals who live in authoritarian settings and examine the news processing techniques and strategies they develop and apply to determine news veracity and news source credibility. Toward this end, work by Mickiewicz (2008), Koch (2013), Wedeen (1999), and others on how citizens of autocracies make sense of media and propaganda provides a good start. But we need a new generation of research on these topics that accounts for the proliferation of the forms of media and propaganda and incorporates the recent theoretical and methodological advances from studies of misinformation and partisan filtering.

Appendix A: Additional Evidence From Cross-National Data

Table A1: Trust in press/television in democracies and autocracies, with individual controls, by wave

	Press	Press	TV	TV
(Intercept)	2.761***	2.851***	2.860***	3.354***
	(0.210)	(0.154)	(0.184)	(0.069)
Democracy	−0.526*	−0.243	−0.705*	−1.397***
	(0.255)	(0.226)	(0.311)	(0.076)
Wave2	−0.058			
	(0.234)			
Wave3	−0.395+	−0.429**	−0.403*	−0.762***
	(0.237)	(0.151)	(0.173)	(0.101)
Wave4	−0.088	−0.162	−0.089	−0.518***
	(0.224)	(0.152)	(0.190)	(0.088)
Wave5	−0.028	−0.091	0.042	−0.374**
	(0.236)	(0.192)	(0.208)	(0.131)
Wave6	−0.205	−0.272	−0.169	−0.571***
	(0.233)	(0.172)	(0.190)	(0.110)
Wave7	−0.311	−0.360*	−0.085	−0.532***
	(0.240)	(0.171)	(0.198)	(0.107)
Democracy*Wave2	0.123			
	(0.281)			
Democracy*Wave3	0.490+	0.137	0.699*	1.302***
	(0.287)	(0.223)	(0.315)	(0.170)
Democracy*Wave4	0.068	−0.224	0.356	1.072***
	(0.261)	(0.221)	(0.365)	(0.203)
Democracy*Wave5	0.000	−0.345	0.074	0.711***
	(0.281)	(0.272)	(0.346)	(0.190)
Democracy*Wave6	0.229	−0.065	0.353	1.036***
	(0.295)	(0.252)	(0.335)	(0.183)
Democracy*Wave7	0.165	−0.173	−0.025	0.689***
	(0.297)	(0.253)	(0.343)	(0.186)
Age		0.000		0.000
		(0.001)		(0.001)
Female		−0.004		0.031**
		(0.008)		(0.010)
Education		−0.013**		−0.028***
		(0.004)		(0.005)
Generalized trust		0.145***		0.118***
		(0.016)		(0.020)
Num.Obs.	587 899	476 733	363 492	330 983

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

Note: Coefficients from linear regression models. Standard errors clustered on country in parentheses. Individual weights from the WVS.

Table A2: Trust in press/television in democracies and autocracies, with country-level controls, without most autocratic regimes

	Press	Press	Press	TV	TV	TV
Democracy	−0.395**	−0.540***	−0.543**	−0.673***	−0.590**	−0.511**
	(0.141)	(0.153)	(0.173)	(0.191)	(0.178)	(0.188)
Age	0.002***	0.002***	0.002***	0.001*	0.001*	0.001+
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.000	0.001	0.003	0.033***	0.033***	0.033***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.009)
Education	−0.004	−0.002	−0.002	−0.023***	−0.022***	−0.021***
	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)
Generalized trust	0.146***	0.144***	0.134***	0.101***	0.101***	0.089***
	(0.011)	(0.011)	(0.013)	(0.010)	(0.010)	(0.011)
GDP per capita		0.000**	0.000***		0.000	0.000**
		(0.000)	(0.000)		(0.000)	(0.000)
Urban population		0.003	0.007		0.000	0.006
		(0.005)	(0.005)		(0.006)	(0.006)
Internet users		0.000	−0.001		−0.001	−0.002
		(0.001)	(0.001)		(0.001)	(0.001)
Unemployment		0.002	−0.004		−0.002	−0.008
		(0.003)	(0.004)		(0.004)	(0.005)
Inflation		0.000**	0.000**		0.000	0.000
		(0.000)	(0.000)		(0.000)	(0.000)
Regime age		0.002	0.003		−0.001	−0.002
		(0.002)	(0.002)		(0.002)	(0.002)
Polarization		−0.038+	−0.022		0.005	0.009
		(0.020)	(0.021)		(0.021)	(0.020)
Population		0.000***	0.000		0.000***	0.000
		(0.000)	(0.000)		(0.000)	(0.000)
Supporter			0.082***			0.115***
			(0.016)			(0.017)
Num.Obs.	317 070	316 834	224 969	273 892	273 656	197 037

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

Note: Coefficients from linear regression models. Standard errors clustered on country in parentheses. Individual weights from the WVS. Country and year fixed effects included. Countries with V-Dem Electoral Democracy index less than 0.2 are excluded. In Columns 1 and 4, sample is restricted to observations with non-missing data on the set of country-level controls (the same sample as in Columns 2 and 5).

Appendix B: Formalization of the Argument

The formalization of the affirmation propaganda argument outlined here is adapted from theoretical models of Bayesian persuasion (Kamenica and Gentzkow 2011), including their application to media control (Gehlbach and Sonin 2014). In these models, one actor, the sender, aims to persuade another actor, the receiver, to take an action that the sender prefers rather than the action that the receiver prefers in the absence of the sender's messages. The formalization here incorporates heterogeneity of prior beliefs among receivers, which in this context corresponds to pro-regime or oppositional attitudes. The analysis below demonstrates that under certain conditions, autocrats have to choose between maintaining existing support and convincing the unpersuaded.

The autocrat is the sender, and the citizens are the receivers. There are two groups of citizens, A (the pro-regime majority) and B (the opposition, or the minority), of sizes α_A and α_B, where $\alpha_A > \alpha_B$, and $\alpha_A + \alpha_B = 1$.

The state of the world $\theta \in \{0, 1\}$ is a random variable, unobserved by autocrat and citizens. The variable θ may represent, e.g., economic or government performance; $\theta = 1$ means that the state of the world is good. Citizens do not observe the state of the world, and they must choose an action $a \in \{a_0, a_1\}$, e.g., a_1 could be voting for the autocrat, and a_0 would be voting against. Citizens' payoffs are dependent on their action and on the state of the world: for any citizen i, the payoff is x if $\theta = 0$ and $a_i = a_0$, $1 - x$ if $\theta = 1$ and $a_i = a_1$, and 0 otherwise.

In a departure from the standard framework, I assume that citizens have heterogeneous prior beliefs about the state of the world, $p_A > x$ and $p_B < x$, where p_j is the weight group j places on the event $\theta = 1$. That is, group A is ex ante inclined to take the autocrat's preferred action a_1, and group B is ex ante not inclined to take that action. The autocrat's payoff is equal to the share of citizens that take the action a_1.

Before the state of the world is realized, the autocrat commits to a "signal structure," which is a probability distribution over messages for each state of the world. With probability β_θ, the autocrat sends the propaganda message $m = 1$. Without loss of generality, I assume $\beta_1 = 1$, so that the news is always "good" when the state of the world is "good." Of primary interest is β_0, which can be interpreted as media bias.

The state of the world is then realized, and the propaganda message is generated based on β. Citizens then update their beliefs using Bayes' rule and choose the action a.

What is the level of media bias β_0 that maximizes the autocrat's payoff? The choice of β_0 by the autocrat is constrained by the conditions under which the receivers would take the sender's preferred action when $m = 1$; following Bergemann and Morris (2019), I refer to these conditions as obedience constraints. I ask: If there are two groups of citizens with different priors, when is it optimal for the autocrat to set media bias β_0 such that the obedience constraint for group B is satisfied (B takes the action a_1), and when is it, instead, optimal to simply focus on satisfying the constraint for group A (ensuring that A is still willing to take the action)?

It is always possible to ensure that group A (the majority) takes the autocrat's preferred action as long as the autocrat is willing to forgo persuading group B (the opposition). For example, if the autocrat sets $\beta_0 = 1$, propaganda always sends a positive signal ($m = 1$), and there is no updating for either group. The autocrat's expected payoff in this case is α_A (the share of A in the population), as only citizens in A choose a_1.

However, the reverse is not true: if the autocrat persuades group B to take the action, it is possible that group A will not take the action. To satisfy the obedience constraint for B, media bias β_0 should be sufficiently low so that $m = 1$ could be an informative message for B. Given that $Pr_B(\theta = 1) = p_B$, the obedience constraint for B is $\frac{p_B}{p_B+(1-p_B)*\beta_0} \geq x$. Rearranging, media bias such that the obedience constraint binds for B is $\beta_0 = \frac{p_B}{1-p_B} * \frac{1-x}{x}$.

Implementing media bias to convince B means that sometimes the autocrat must send

$m = 0$ when $\theta = 0$. When this is the case, group A (the majority) will also infer that $\theta = 0$ and not take the action preferred by the autocrat.

The choice between two strategies—targeting only the majority versus attempting also to persuade the opposition—depends on the various parameters of the model. As shown above, the payoff from the first strategy is α_A. To define the autocrat's expected payoff in the second case, posit an (ad hoc) "true" prior $p = Pr(\theta = 1)$. Then, the autocrat's expected payoff is $p + (1 - p) * \frac{p_B}{1-p_B} * \frac{1-x}{x}$, given the optimal media bias derived above.

The autocrat thus focuses on convincing B if $p + (1 - p) * \frac{p_B}{1-p_B} * \frac{1-x}{x} > \alpha_A$, so the choice depends on the size of the majority (α_A) and on p_B. Reaching out "across the aisle" can be beneficial only if p_B is sufficiently large (close to x), so the autocrat can win B over by sending $m = 0$ only occasionally, and if α_A is relatively small.

With small values of p_B—if p_B is distant from x and, therefore, from p_A—autocrats need to send informative messages ($m = 0$) often if they want to win over the highly skeptical opposition, but such messages would also alienate many members of the majority. In other words, if there is a large divergence in priors between the supporting majority and the opposition, it is not optimal for the autocrat to cater to the latter. Further, if the size of the ex-ante pro-regime group is large enough, the autocrat can simply produce uninformative (positive) messages all of the time regardless of the difference in priors between the two groups.

The situation when there is a strong majority that supports the autocrat and the opposition is small but ideologically distant is observed in certain authoritarian regimes. In this environment, the autocrat would in equilibrium choose substantial media bias that targets the majority group alone—that is, would choose affirmation propaganda.

Appendix C: Description of the Online Experiment (the Main Study)

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 sample size was determined based on the number of experimental treatments and the heterogeneous effects that were to be examined.

The experiments embedded in the surveys involved slight deception—specifically, some participants might have seen news messages attributed to news sources that had not actually published these news stories, and the purpose of the study was not fully disclosed in the beginning of the surveys. The deception was necessary in order to avoid demand effects and other distortions: if participants were aware that the purpose of the study was to understand their news source perceptions and the relationship between source perceptions and political views, they might not have answered truthfully. The purpose of the study and the nature of the experimental manipulation were fully disclosed to participants in the debriefing message displayed after the completion of each survey. The subjects were able to contact the researcher in case they had any questions.

Experimental Vignette

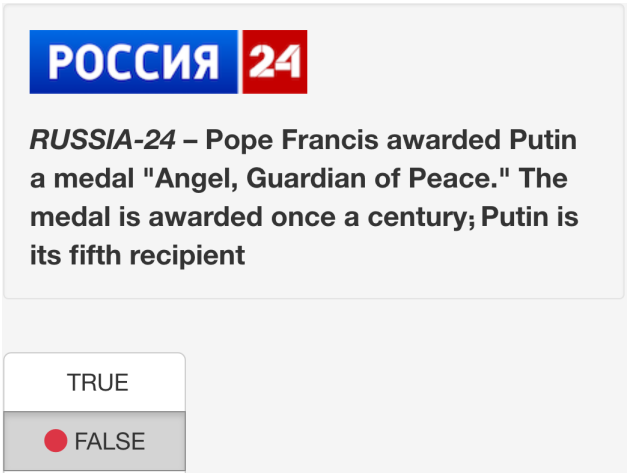

Figure C1: An example of an experimental vignette with a news story attributed to a state-controlled news outlet, Russia-24

Summary Statistics

Table C1: Summary statistics for the three samples

	Main study		National survey		Online panel	
Variable	%	Non-missing	%	Non-missing	%	Non-missing
Approves of president (dummy)	40.9	15637	67.8	1567	51.6	2098
Uses critical media	43.9	15533	NA	NA	18.4	2098
Uses state-controlled media	64.2	15533	NA	NA	81.6	2098
Uses state TV	40.9	15533	80.1	1560	65.4	2098
Female	55.2	14431	55.0	1567	50.0	2098
Higher education	81.9	14390	29.5	1567	58.4	2098
Age 18-24	6.3	14680	9.3	1567	10.9	2098
Age 25-34	21.8	14680	19.1	1567	25.9	2098
Age 35-44	23.4	14680	22.4	1567	30.7	2098
Age 45-54	20.8	14680	13.5	1567	14.8	2098
Age 55-64	19.4	14680	21.1	1567	14.3	2098
Age 65+	8.2	14680	14.6	1567	3.5	2098

Note: The sample is limited to respondents with non-missing data on presidential approval.

The Procedure for the Selection of News Stories

Fourteen news stories in the main quiz and 16 stories in the second quiz (see the main text for details) were selected from 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 propaganda-consistent, propaganda-inconsistent, and neutral stories.

To check the veracity of these news stories, I relied on existing fact-checking resources such as *Politifact* and the fact-checks regularly published by the Russian investigative web site *The Insider*. When existing 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.

Two slots in the quiz were reserved for "recent" stories that were updated two or three times a week based on recent news reports. 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. *Yandex* 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 *Yandex News* 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 developing and could change 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 headline based on the text of the corresponding news story or slightly editing it for clarity.

The Categorization of State-Controlled and Critical Media Outlets

Various analyses in this study rely on a categorization of news outlets as state-controlled or critical. This subsection lists all the news outlets that are used in the study either as experimental treatments or as answer choices in questions about media trust and media usage. News outlets that are included as treatments in the experiment are in **bold**.

State-controlled media outlets: ***Channel One***, ***Russia-24***, *Russia-1*, *Vesti*, ***RT***, ***RIA***, *TASS*, *Zvezda*, *Sputnik*, *Rossiyskaya Gazeta (RG)* (all of the preceding outlets are 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).

Critical media outlets: ***Rain***, *Novaya Gazeta*, *Vedomosti*, *Rosbalt* (owned by independent entrepreneurs); ***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 propagandistic as the state-controlled media organizations listed above.

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 critical news outlets such as *BBC* were added.

The categorization into state-controlled and 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; Schimpfössl and Yablokov 2017).

News Stories in the Study

Table C2: News messages evaluated in the main study

					Mean evaluations		
Code	Text	False?	Political	Direction	Overall	Critic	Supporter
1	A man in Britain pretended to be deaf for 62 years to avoid listening to his "too talkative" wife	FALSE	No	Neutral	0.581	0.575	0.577
2	Because of sanctions against Russia, the European Union has lost 500 billion euros	FALSE	Yes	Propaganda-consistent	0.493	0.401	0.616
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	Yes	Propaganda-inconsistent	0.249	0.328	0.138
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	No	Neutral	0.446	0.451	0.428
5	Russian scientists created plants that constantly phosphoresce. The new kind of plant is developed based on the tobacco plant, using fungi genes	TRUE	No	Neutral	0.390	0.403	0.373
6	A biology student from the University of Miami crossbred strawberries with marijuana, fulfilling his old dream	FALSE	No	Neutral	0.359	0.391	0.326

7	Trump thanked Putin for the oil deal and said that "he acted like a real gentleman"	TRUE	Yes	Propaganda-consistent	0.520	0.490	0.574
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	Yes	Propaganda-consistent	0.400	0.372	0.442
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	Yes	Propaganda-consistent	0.185	0.145	0.227
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	Yes	Propaganda-consistent	0.430	0.379	0.500
11	Russia is again bringing in uranium waste from Germany. In the 2000s, this practice was stopped after protests	TRUE	Yes	Propaganda-inconsistent	0.574	0.663	0.448
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	No	Neutral	0.705	0.700	0.706

13	In case of war with the U.S., Russia could be destroyed in three hours, Chinese military analysts calculated	FALSE	Yes	Propaganda-inconsistent	0.342	0.400	0.248
14	Putin signs a new law that gives him lifetime immunity and the right to be a lifetime senator	TRUE	Yes	Propaganda-inconsistent	0.262	0.344	0.156
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	Yes	Propaganda-consistent	0.269	0.258	0.325
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	Yes	Propaganda-consistent	0.826	0.802	0.868
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	Yes	Propaganda-inconsistent	0.471	0.584	0.301
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	No	Neutral	0.804	0.846	0.775

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	No	Neutral	0.393	0.379	0.389
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	Yes	Propaganda-inconsistent	0.758	0.776	0.715
21	Documents confirming Trump's links to Russia were obtained from the Deutsche Bank	FALSE	Yes	Propaganda-inconsistent	0.219	0.249	0.178
22	In California, the words "husband," "wife," "groom," and "bride" are banned because of same-sex marriages	FALSE	Yes	Propaganda-consistent	0.644	0.580	0.734
23	Russia adjusts the date of the ending of the Second World War. It will be September 3 now	TRUE	Yes	Propaganda-inconsistent	0.480	0.540	0.389
24	The Central Bank burns one ton of banknotes with denominations of 100 and 500 rubles that were infected by the coronavirus	FALSE	No	Neutral	0.105	0.096	0.101

25	Russian banks moved some employees to work and live in the office. They are promised higher salaries and bonuses	TRUE	No	Neutral	0.369	0.376	0.328
26	The number of Ukrainians who positively perceive Russia has increased by 50% in three years	TRUE	Yes	Propaganda-consistent	0.434	0.371	0.504
27	The State Duma adopts in the first reading a law that will ban giving human names to animals	FALSE	No	Neutral	0.123	0.118	0.109
28	German zoos want to feed some animals to others because due to a lack of visitors they are out of money	FALSE	Yes	Propaganda-consistent	0.278	0.247	0.335
29	Putin awards Kim Jong Un with a medal "75 years of victory in the Great Patriotic War"	TRUE	Yes	Propaganda-inconsistent	0.508	0.569	0.429
30	In Tuva, a man was rescued from a bear’s den where he spent a month with a broken spine	FALSE	No	Neutral	0.494	0.524	0.466
31	Zhirinovsky suggests testing the coronavirus vaccine on prisoners	TRUE	Yes	Neutral	0.606	0.656	0.572
32	The wealth of the richest Americans has grown by $434 billion since March, an analysis of the Forbes ranking shows	TRUE	No	Neutral	0.635	0.661	0.649

33	For the second time, Poroshenko did not arrive for questioning in an investigation about the illegal import of paintings	TRUE	Yes	Propaganda-consistent	0.784	0.766	0.807
34	Merkel refuses to go to Washington for a G7 summit	TRUE	Yes	Neutral	0.544	0.513	0.572
35	Obama's former aide suspects Russia is connected to riots in the U.S.	TRUE	Yes	Propaganda-consistent	0.765	0.748	0.813
36	Hitler's house in Austria will become a police station	TRUE	Yes	Neutral	0.489	0.519	0.437
37	U.S. Attorney General says "foreign forces" intervene in protests in America to escalate violence	TRUE	Yes	Propaganda-consistent	0.746	0.737	0.769
38	A powerful landslide in Norway washes eight houses into the sea	TRUE	No	Neutral	0.773	0.792	0.754
39	Brazil threatens to leave WHO because of "ideological bias"	TRUE	Yes	Neutral	0.597	0.602	0.594
40	Canada's prime minister bends a knee at an anti-racist rally	TRUE	Yes	Neutral	0.699	0.698	0.694
41	In Lviv, a MiG-29 that had arrived for modernization was plundered for parts	TRUE	Yes	Propaganda-consistent	0.460	0.431	0.529
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	No	Neutral	0.598	0.629	0.575
43	Peskov says there are no oligarchs in Russia	TRUE	Yes	Neutral	0.611	0.649	0.508

44	In London, archeologists find the ruins of the first British theatre	TRUE	No	Neutral	0.689	0.701	0.637
45	Ukraine gets the status of NATO enhanced opportunity partner	TRUE	Yes	Propaganda-inconsistent	0.448	0.484	0.382
46	In May, the Polish military occupied a part of the Czech Republic. Poland explains it was an "accident" and a "misunderstanding"	TRUE	Yes	Neutral	0.240	0.238	0.252
47	Kyrgyz prime minister resigns over the radio frequency sale scandal	TRUE	Yes	Neutral	0.409	0.406	0.394
48	A passenger on a train in Switzerland forgot a bag of gold in a car	TRUE	No	Neutral	0.412	0.403	0.392
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	Yes	Propaganda-inconsistent	0.635	0.659	0.597
50	Protesters in New York poisoned policemen with milkshakes with added bleach	FALSE	Yes	Propaganda-consistent	0.154	0.153	0.151

Note: The last three columns present the proportion of those who evaluated the corresponding story as true in the full sample, among Putin supporters, and among Putin critics, respectively. 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. See the text for details. Story 3 was also included in the nationally representative survey (Study 2). Stories 7, 10, and 11 were also included in the OMI online panel (Study 3).

Balance Check

Table C3: Covariate balance check for the experiment (the main study)

News story	Female	Age group	Higher education	Strong supporter	Strong critic	Moderate supporter	Moderate critic
104	0.287	0.469	0.149	0.887	0.406	0.647	0.336
105	0.953	0.968	0.486	0.507	0.734	0.911	0.767
106	0.245	0.385	0.014	0.445	0.793	0.973	0.575
107	0.539	0.851	0.634	0.036	0.185	0.671	0.430
108	0.222	0.895	0.936	0.990	0.628	0.109	0.400
109	0.222	0.903	0.415	0.340	0.045	0.764	0.085
110	0.054	0.997	0.328	0.992	0.173	0.233	0.709
111	0.816	0.932	0.455	0.455	0.866	0.953	0.763
112	0.782	0.607	0.642	0.919	0.780	0.123	0.227
113	0.981	0.518	0.705	0.483	0.666	0.595	0.161
114	0.516	0.339	0.344	0.818	0.091	0.640	0.691
5221	0.965	0.418	0.380	0.764	0.936	0.288	0.657
5222	0.742	0.517	0.319	0.816	0.125	0.387	0.993
5301	0.105	0.410	0.454	0.656	0.488	0.585	0.340
5302	0.643	0.111	0.842	0.809	0.866	0.638	0.599
6021	0.452	0.132	0.739	0.245	0.500	0.456	0.657
6022	0.936	0.018	0.744	0.505	0.141	0.495	0.140
6041	0.290	0.855	0.432	0.262	0.858	0.885	0.472
6042	0.351	0.913	0.305	0.983	0.054	0.691	0.736
6061	0.901	0.056	0.080	0.711	0.155	0.450	0.833
6062	0.840	0.145	0.143	0.971	0.912	0.852	0.627
6081	0.434	0.552	0.630	0.259	0.887	0.652	0.792
6082	0.170	0.881	0.405	0.467	0.928	0.618	0.730
6101	0.688	0.787	0.902	0.022	0.091	0.012	0.104
6102	0.067	0.929	0.174	0.315	0.233	0.910	0.509
6131	0.302	0.276	0.844	0.262	0.776	0.455	0.984
6132	0.352	0.026	0.151	0.961	0.495	0.987	0.286
6151	0.858	0.506	0.674	0.798	0.583	0.541	0.171
6152	0.144	0.066	0.988	0.389	0.930	0.745	0.611
6161	0.536	0.526	0.667	0.001	0.503	0.716	0.570
6162	0.352	0.154	0.444	0.288	0.329	0.288	0.580

Note: Results of chi-square test for equality of covariate values across treatment groups, by news story. In each column, I provide p-values from chi-squared tests of equality of covariate values across treatment groups (news sources) for the corresponding covariate. See story texts in the list of stories above.

Appendix D: Additional Evidence From the Online Experiment (the Main Study)

Putin Supporters Are More Receptive to Propaganda

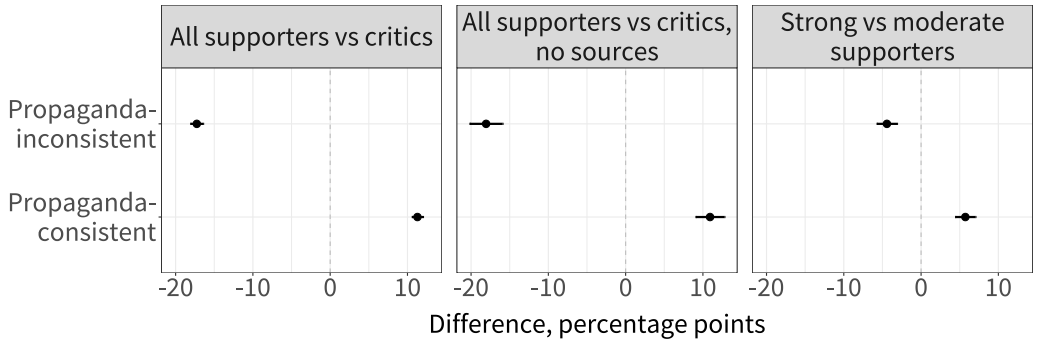

Figure D1: Covariate-adjusted differences in the shares of respondents who found stories credible. Calculated from linear regressions of story evaluations on Putin approval and covariates. Results from the main study. 95% confidence intervals are shown

Figure D2 compares the differences between Putin critics and supporters in evaluations of selected stories between the main study and the two additional surveys. The story labels refer to the following stories in Table G2: “Growth in Ukraine”—story 3; “Trump and Putin”—story 7; “COVID origins”—story 10; “Nuclear waste”—story 11.

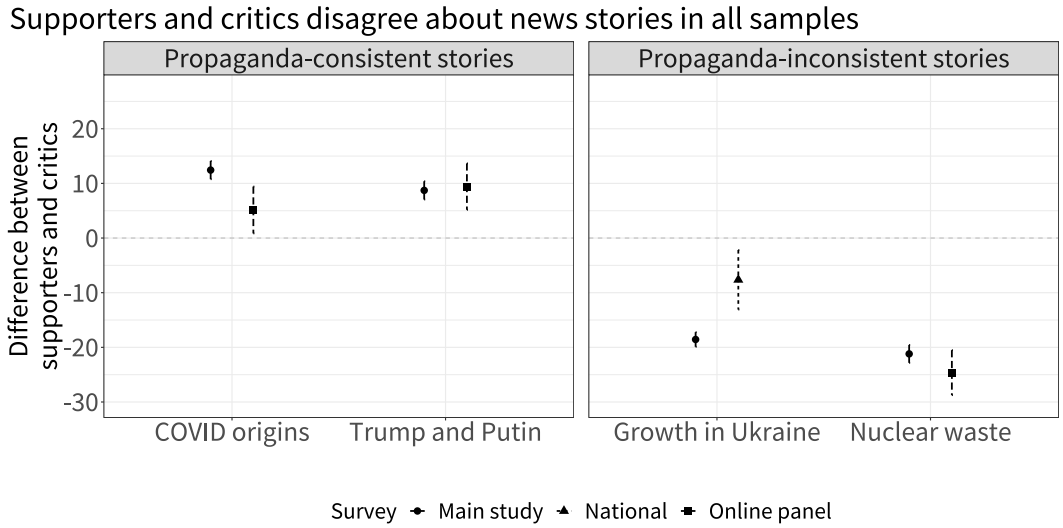

Figure D2: Covariate-adjusted differences in the shares of Putin supporters and critics who found stories credible. Results from Studies 1, 2, and 3. 95% confidence intervals are shown

Experimental Results with Other Measures of Pro-Regime Orientations

As discussed in the main text, empirical evidence suggests that Russians are generally truthful when reporting their presidential approval. Nonetheless, I have implemented additional measures to improve the robustness of results. First, I asked the respondents about events or developments in Russian history they are proud of. One of the possible answers was "the reunion with Crimea" (the annexation of Crimea in 2014), very popular among Putin supporters but not among critics. The correlation between presidential approval and pride in the annexation was about 0.48.

Second, in the beginning of the quiz, respondents evaluated two news stories. One reported that the European Union had lost 500 billion euros because of sanctions against Russia (an untrue propaganda statement spread by Vladimir Putin). The other story reported that the Ukrainian economy had been growing faster than the Russian economy (a true story incongruent with common beliefs of government loyalists, as Ukraine was typically portrayed in Russian state media as a failed state). In the quiz, these stories were always attributed to one news source, a news agency *Interfax*.

Then, I combined responses to these two statements in an index that takes the value of 2 if a respondent finds the pro-government EU story to be true and the Ukraine story to be false, the value of 0 if a respondent finds the EU story to be false and the Ukraine story to be true, and the value of 1 if both stories are found to be false or both are found to be true. Larger values are consistent with stronger pro-regime sympathies. The correlation between presidential approval and this measure is about 0.32.

Figure D3 shows the effect of switching from critical to state media depending on pride in Crimea and on feelings toward EU and Ukraine; regression models are in Table D4.

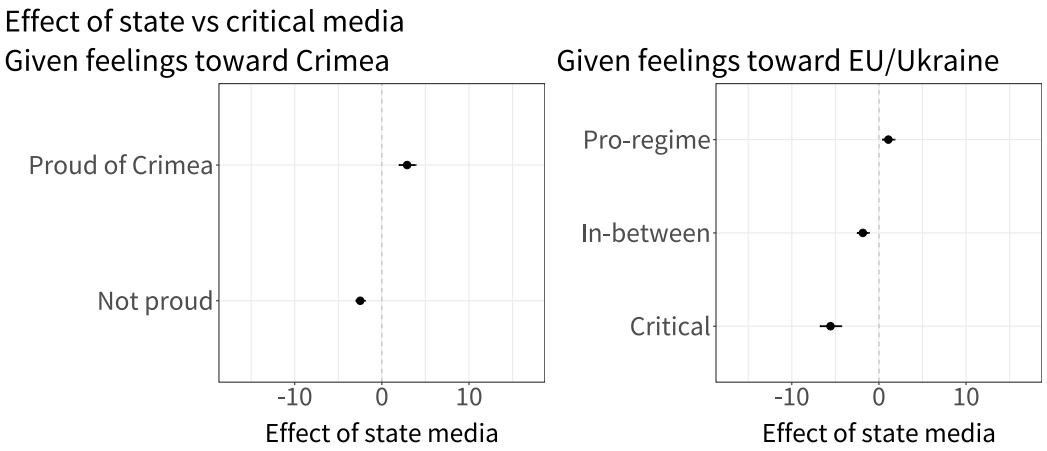

Figure D3: The effect of changing the treatment from critical to state media outlet on evaluations of news stories. Calculations based on a linear regression of news story evaluations, accounting for state control and government support; results from the main study. 95% confidence intervals are shown

Experimental Results by Individual News Sources

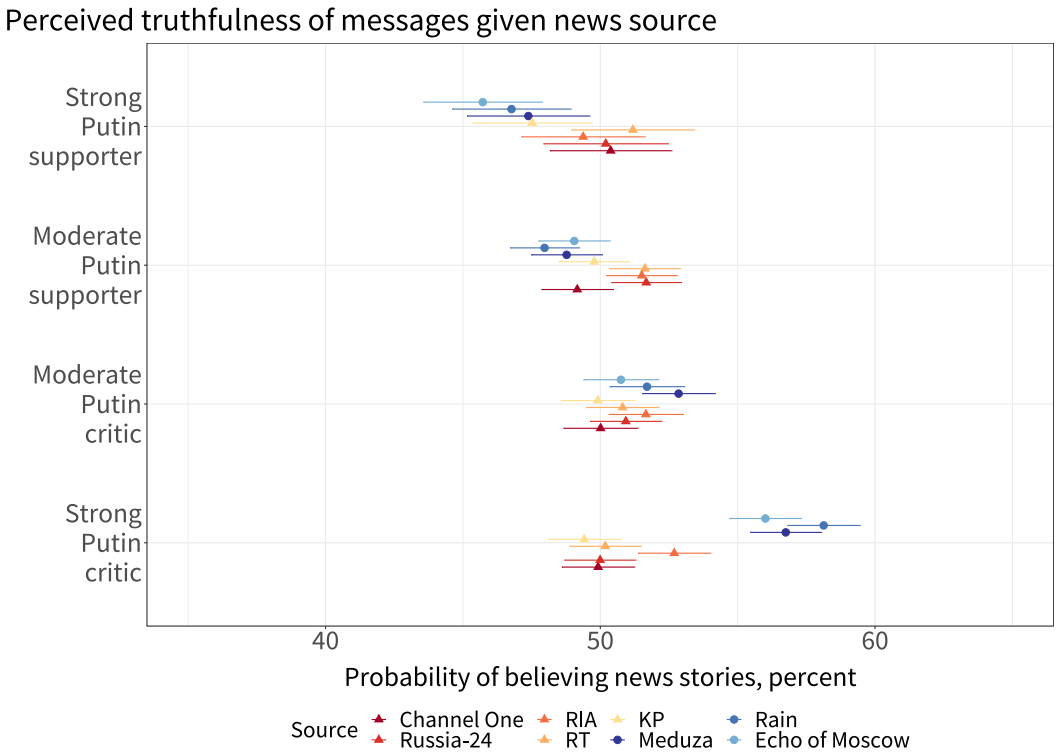

Figure D4: Probability of evaluating news stories as true when they are attributed to specific state-run and critical media outlets, by approval of Vladimir Putin. Calculations based on a linear regression of news story evaluations on media outlet dummies and presidential approval (see text for details); results from the main study. 95% confidence intervals are shown

Experimental Results for Pre-Selected and "Recent" News Stories

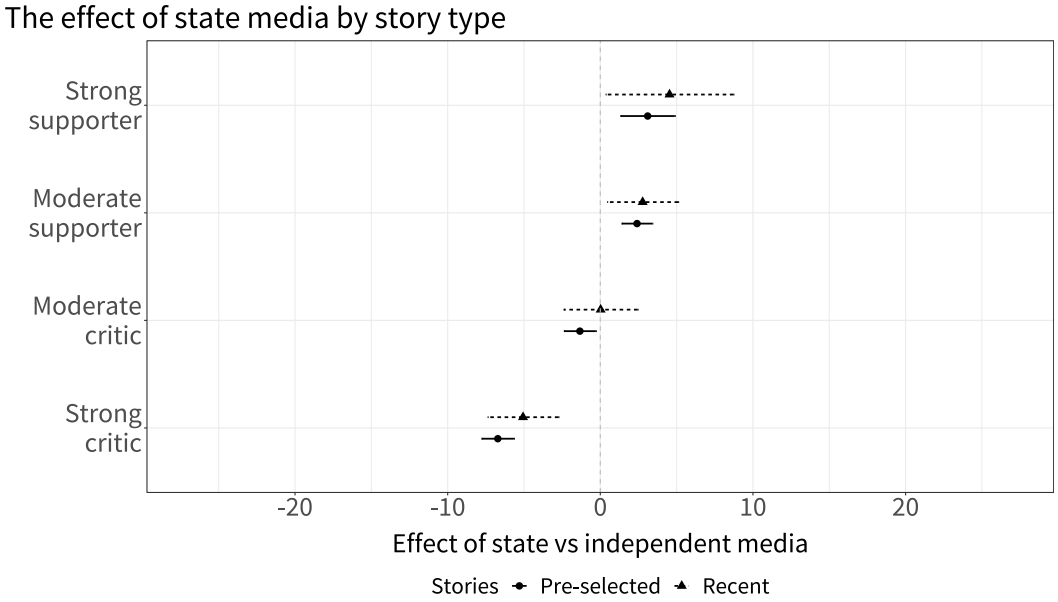

Figure D5: The effect of changing the treatment from critical to state media outlet on evaluations of news stories, by approval of Vladimir Putin and by story type. Calculations based on a linear regression of news story evaluations, accounting for state control and presidential approval; results from the main study. 95% confidence intervals are shown

Experimental Results with Alternative Categorizations of State-Controlled Media Outlets

In additional models, I consider alternative categorization of state-controlled media outlets. In the first model, *RBC* is a state-controlled media organization. In the second model, state-controlled outlets are only those that are directly owned by the government: *Channel One*, *Russia-24*, *RIA*, and *RT*. *RBC* and *KP* are categorized as "Other." The results, reported in Figure D6 and in Table D4 below, are very similar to the results in the main text.

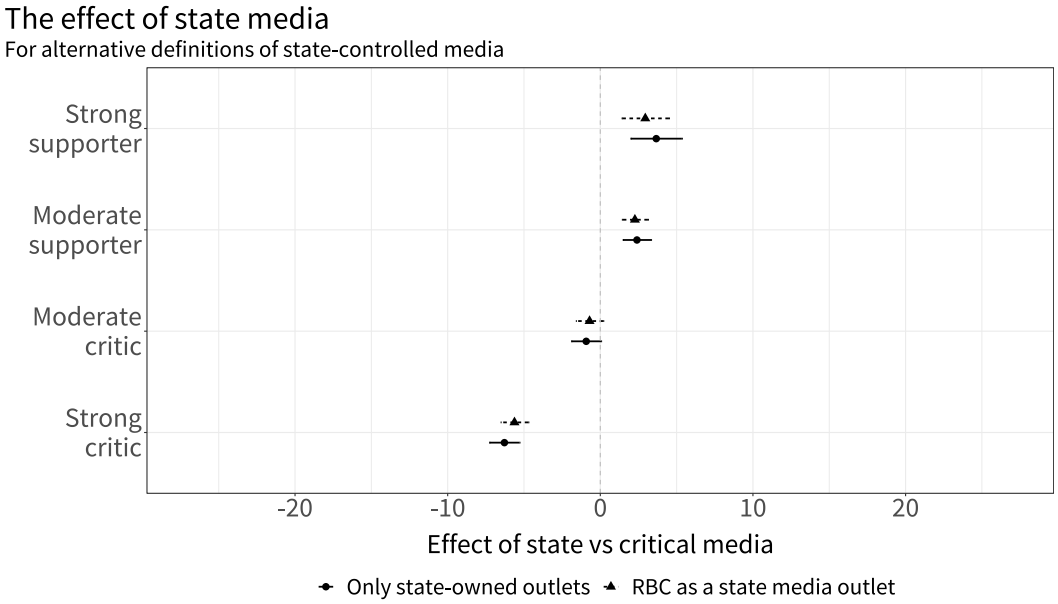

Figure D6: Effect of changing the treatment from critical to state media outlet on evaluations of news stories, by approval of Vladimir Putin. Here, RBC is considered as a state-controlled outlet. Calculations based on a linear regression of news story evaluations, accounting for state control and presidential approval; results from the main study. 95% confidence intervals are shown

Regression Tables

Table D1: Treatment effect in the main study

	Model 1	Model 2	Model 3
Intercept	0.374^{***}	0.413^{***}	-0.542^{***}
	(0.014)	(0.016)	(0.056)
Source: Critical	0.045^{***}	0.047^{***}	0.200^{***}
	(0.007)	(0.008)	(0.028)
Source: State-controlled	-0.020^{**}	-0.016^{*}	-0.092^{***}
	(0.007)	(0.007)	(0.026)
Source: RBC	0.034^{***}	0.034^{***}	0.151^{***}
	(0.009)	(0.009)	(0.036)
Somewhat disapprove	-0.021^{*}	-0.012	-0.094^{**}
	(0.008)	(0.009)	(0.032)
Somewhat approve	-0.033^{***}	-0.025^{**}	-0.149^{***}
	(0.008)	(0.009)	(0.032)
Certainly approve	-0.049^{***}	-0.042^{***}	-0.221^{***}
	(0.012)	(0.013)	(0.046)
Story order	0.006^{***}	0.006^{***}	0.025^{***}
	(0.000)	(0.000)	(0.001)
Source: Critical*Somewhat disapprove	-0.031^{**}	-0.036^{***}	-0.138^{***}
	(0.010)	(0.011)	(0.039)
Source: State-controlled*Somewhat disapprove	0.023^{*}	0.016	0.104^{**}
	(0.010)	(0.010)	(0.036)
Source: RBC*Somewhat disapprove	-0.006	-0.010	-0.027
	(0.013)	(0.013)	(0.051)
Source: Critical*Somewhat approve	-0.051^{***}	-0.054^{***}	-0.226^{***}
	(0.010)	(0.011)	(0.039)
Source: State-controlled*Somewhat approve	0.036^{***}	0.032^{**}	0.164^{***}
	(0.010)	(0.010)	(0.036)
Source: RBC*Somewhat approve	-0.011	-0.009	-0.048
	(0.012)	(0.013)	(0.050)
Source: Critical*Certainly approve	-0.055^{***}	-0.052^{***}	-0.245^{***}
	(0.014)	(0.015)	(0.056)
Source: State-controlled*Certainly approve	0.042^{**}	0.045^{**}	0.189^{***}
	(0.014)	(0.014)	(0.052)
Source: RBC*Certainly approve	-0.022	-0.017	-0.096
	(0.018)	(0.018)	(0.072)
Age		-0.004^{***}	
		(0.001)	
Female		-0.027^{***}	
		(0.003)	
Higher education		0.009^{*}	
		(0.003)	
R^2	0.102	0.103	
Adj. R^2	0.102	0.103	
Num. obs.	198818	182105	198818
RMSE	0.471	0.471	
N Clusters	15626	14100	
AIC			252202.304
BIC			252906.114
Log Likelihood			-126032.152
Deviance			252064.304

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Estimates from regression models (OLS in Models 1 and 2, logit in Model 3) with news story evaluations as dependent variables. The reference category in presidential approval is 'Certainly disapprove.' The reference category in source treatments is 'No source.' Data from the social media sample. Story and day fixed effects included. Heteroskedasticity-robust standard errors in parentheses (clustered on respondent).

Table D2: Treatment effect in the main study (individual news sources)

	Model 1
Intercept	0.374 (0.014)***
Source: Meduza	0.043 (0.009)***
Source: Rain	0.057 (0.009)***
Source: Echo of Moscow	0.035 (0.009)***
Source: RBC	0.034 (0.009)***
Source: Channel One	−0.026 (0.009)**
Source: Russia-24	−0.025 (0.009)**
Source: RT	−0.023 (0.009)**
Source: RIA	0.002 (0.009)
Source: KP	−0.031 (0.009)***
Somewhat disapprove	−0.021 (0.008)*
Somewhat approve	−0.033 (0.008)***
Certainly approve	−0.049 (0.012)***
Story order	0.006 (0.000)***
Source: Meduza*Somewhat disapprove	−0.018 (0.012)
Source: Rain*Somewhat disapprove	−0.043 (0.013)***
Source: Echo of Moscow*Somewhat disapprove	−0.032 (0.013)*
Source: RBC*Somewhat disapprove	−0.006 (0.013)
Source: Channel One*Somewhat disapprove	0.022 (0.013)
Source: Russia-24*Somewhat disapprove	0.030 (0.012)*
Source: RT*Somewhat disapprove	0.027 (0.012)*
Source: RIA*Somewhat disapprove	0.011 (0.013)
Source: KP*Somewhat disapprove	0.026 (0.013)*
Source: Meduza*Somewhat approve	−0.047 (0.012)***
Source: Rain*Somewhat approve	−0.068 (0.012)***
Source: Echo of Moscow*Somewhat approve	−0.036 (0.012)**
Source: RBC*Somewhat approve	−0.011 (0.012)
Source: Channel One*Somewhat approve	0.026 (0.012)*
Source: Russia-24*Somewhat approve	0.050 (0.012)***
Source: RT*Somewhat approve	0.048 (0.012)***
Source: RIA*Somewhat approve	0.021 (0.012)
Source: KP*Somewhat approve	0.037 (0.012)**
Source: Meduza*Certainly approve	−0.045 (0.018)*
Source: Rain*Certainly approve	−0.065 (0.017)***
Source: Echo of Moscow*Certainly approve	−0.054 (0.017)**
Source: RBC*Certainly approve	−0.022 (0.018)
Source: Channel One*Certainly approve	0.053 (0.018)**
Source: Russia-24*Certainly approve	0.051 (0.018)**
Source: RT*Certainly approve	0.059 (0.018)***
Source: RIA*Certainly approve	0.016 (0.018)
Source: KP*Certainly approve	0.030 (0.017)
R^2	0.102
Adj. R^2	0.102
Num. obs.	198818
RMSE	0.471
N Clusters	15626

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Estimates from linear regressions with news story evaluations as dependent variables. Data from the social media sample. The reference category in presidential approval is 'Certainly disapprove.' The reference category in source treatments is 'No source.' Story and day fixed effects included. Heteroskedasticity-robust standard errors in parentheses (clustered on respondent).

Table D3: Treatment effect in the main study (alternative definitions of state-controlled media)

	Model 1	Model 2
Intercept	0.373***	0.374***
	(0.014)	(0.014)
Source: Critical	0.045***	0.045***
	(0.007)	(0.007)
Source: State-controlled	−0.011	
	(0.007)	
Somewhat disapprove	−0.021*	−0.021*
	(0.008)	(0.008)
Somewhat approve	−0.033***	−0.033***
	(0.008)	(0.008)
Certainly approve	−0.049***	−0.049***
	(0.012)	(0.012)
Story order	0.006***	0.006***
	(0.000)	(0.000)
Source: Critical*Somewhat disapprove	−0.031**	−0.031**
	(0.010)	(0.010)
Source: State-controlled*Somewhat disapprove	0.018	
	(0.009)	
Source: Critical*Somewhat approve	−0.051***	−0.051***
	(0.010)	(0.010)
Source: State-controlled*Somewhat approve	0.028**	
	(0.009)	
Source: Critical*Certainly approve	−0.055***	−0.055***
	(0.014)	(0.014)
Source: State-controlled*Certainly approve	0.031*	
	(0.013)	
Source: State-owned		−0.018*
		(0.007)
Source: Other		0.002
		(0.008)
Source: State-owned*Somewhat disapprove		0.022*
		(0.010)
Source: Other*Somewhat disapprove		0.010
		(0.011)
Source: State-owned*Somewhat approve		0.036***
		(0.010)
Source: Other*Somewhat approve		0.013
		(0.011)
Source: State-owned*Certainly approve		0.045**
		(0.014)
Source: Other*Certainly approve		0.004
		(0.015)
R^2	0.101	0.102
Adj. R^2	0.101	0.101
Num. obs.	198818	198818
RMSE	0.471	0.471
N Clusters	15626	15626

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Estimates from linear regression models. with news story evaluations as dependent variables. In Model 1, RBC is treated as a state-controlled outlet. In Model 2, state-controlled outlets are divided into 'State-owned' and 'Other.' In Model 1, RBC is treated as a state-controlled outlet. The reference category in presidential approval is 'Certainly disapprove.' The reference category in source treatments is 'No source.' Data from the social media sample. Story and day fixed effects included. Heteroskedasticity-robust standard errors in parentheses (clustered on respondent).

Table D4: Treatment effect in the main study (alternative measures of pro-regime attitudes)

	Model 1	Model 2
Intercept	0.353^{***}	0.384^{***}
	(0.007)	(0.009)
Source: Critical	0.021^{***}	0.045^{***}
	(0.004)	(0.009)
Source: State-controlled	-0.004	-0.011
	(0.004)	(0.008)
Source: RBC	0.025^{***}	0.038^{***}
	(0.005)	(0.011)
Proud of Crimea	-0.026^{***}	
	(0.007)	
Story order	0.006^{***}	0.006^{***}
	(0.000)	(0.000)
Source: Critical*Proud of Crimea	-0.027^{**}	
	(0.009)	
Source: State-controlled*Proud of Crimea	0.027^{**}	
	(0.008)	
Source: RBC*Proud of Crimea	0.005	
	(0.011)	
EU-Ukraine feelings: In-between		-0.042^{***}
		(0.008)
EU-Ukraine feelings: Pro-regime		-0.038^{***}
		(0.008)
Critical*EU-Ukraine In-between		-0.019
		(0.010)
State-controlled*EU-Ukraine In-between		0.019
		(0.009)
Source: RBC*EU-Ukraine In-between		-0.004
		(0.013)
Source: Critical*EU-Ukraine Pro-regime		-0.052^{***}
		(0.010)
Source: State-controlled*EU-Ukraine Pro-regime		0.014
		(0.010)
Source: RBC*EU-Ukraine Pro-regime		-0.019
		(0.013)
R^2	0.100	0.100
Adj. R^2	0.099	0.100
Num. obs.	242060	250609
RMSE	0.471	0.471
N Clusters	19029	19712

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Estimates from linear regressions with news story evaluations as dependent variables. Data from the social media sample. Approval measures: pride in Crimea annexation (Model 1), feelings toward EU and Ukraine (Model 2); see text for details Story and day fixed effects included. Heteroskedasticity-robust standard errors in parentheses (clustered on respondent).

Table D5: Treatment effect in the main study given news story content

	Model 1	Model 2
Intercept	0.509 (0.016)***	0.497 (0.018)***
Source: Critical	0.022 (0.012)	0.065 (0.016)***
Source: State-controlled	−0.035 (0.011)**	0.015 (0.015)
Source: RBC	0.029 (0.015)	0.084 (0.020)***
Somewhat disapprove	−0.095 (0.014)***	0.004 (0.019)
Somewhat approve	−0.182 (0.014)***	0.002 (0.019)
Certainly approve	−0.207 (0.019)***	−0.059 (0.028)*
Story order	0.006 (0.000)***	0.006 (0.000)***
Neutral story	−0.114 (0.014)***	
Pro-government story	−0.240 (0.013)***	
Source: Critical*Somewhat disapprove	−0.021 (0.017)	−0.057 (0.023)*
Source: State-controlled*Somewhat disapprove	0.030 (0.016)	−0.006 (0.022)
Source: RBC*Somewhat disapprove	−0.018 (0.022)	−0.051 (0.030)
Source: Critical*Somewhat approve	−0.027 (0.016)	−0.063 (0.023)**
Source: State-controlled*Somewhat approve	0.054 (0.015)***	0.016 (0.021)
Source: RBC*Somewhat approve	0.004 (0.021)	−0.082 (0.029)**
Source: Critical*Certainly approve	−0.056 (0.023)*	−0.045 (0.034)
Source: State-controlled*Certainly approve	0.013 (0.022)	0.051 (0.032)
Source: RBC*Certainly approve	−0.056 (0.029)	0.012 (0.043)
Source: Critical*Neutral story	0.033 (0.017)	
Source: State-controlled*Neutral story	0.027 (0.016)	
Source: RBC*Neutral story	0.016 (0.021)	
Source: Critical*Pro-government story	0.030 (0.015)*	
Source: State-controlled*Pro-government story	0.017 (0.014)	
Source: RBC*Pro-government story	0.003 (0.020)	
Somewhat disapprove*Neutral story	0.081 (0.020)***	
Somewhat approve*Neutral story	0.158 (0.019)***	
Certainly approve*Neutral story	0.102 (0.028)***	
Somewhat disapprove*Pro-government story	0.134 (0.017)***	
Somewhat approve*Pro-government story	0.274 (0.017)***	
Certainly approve*Pro-government story	0.350 (0.027)***	
Source: Critical*Somewhat disapprove*Neutral story	−0.016 (0.024)	
Source: State-controlled*Somewhat disapprove*Neutral story	−0.012 (0.022)	
Source: RBC*Somewhat disapprove*Neutral story	0.018 (0.031)	
Source: Critical*Somewhat approve*Neutral story	−0.045 (0.023)*	
Source: State-controlled*Somewhat approve*Neutral story	−0.035 (0.021)	
Source: RBC*Somewhat approve*Neutral story	−0.017 (0.030)	
Source: Critical*Certainly approve*Neutral story	0.024 (0.033)	
Source: State-controlled*Certainly approve*Neutral story	0.061 (0.031)*	
Source: RBC*Certainly approve*Neutral story	0.063 (0.042)	
Source: Critical*Somewhat disapprove*Pro-government story	−0.011 (0.022)	
Source: State-controlled*Somewhat disapprove*Pro-government story	−0.010 (0.020)	
Source: RBC*Somewhat disapprove*Pro-government story	0.018 (0.029)	
Source: Critical*Somewhat approve*Pro-government story	−0.026 (0.022)	
Source: State-controlled*Somewhat approve*Pro-government story	−0.017 (0.020)	
Source: RBC*Somewhat approve*Pro-government story	−0.026 (0.028)	
Source: Critical*Certainly approve*Pro-government story	−0.021 (0.032)	
Source: State-controlled*Certainly approve*Pro-government story	0.029 (0.030)	
Source: RBC*Certainly approve*Pro-government story	0.038 (0.041)	
Pre-selected story		−0.128 (0.014)***
Source: Critical*Pre-selected story		−0.025 (0.017)
Source: State-controlled*Pre-selected story		−0.041 (0.016)*
Source: RBC*Pre-selected story		−0.058 (0.022)**
Somewhat disapprove*Pre-selected story		−0.029 (0.020)
Somewhat approve*Pre-selected story		−0.041 (0.020)*
Certainly approve*Pre-selected story		0.013 (0.029)
Source: Critical*Somewhat disapprove*Pre-selected story		0.031 (0.025)
Source: State-controlled*Somewhat disapprove*Pre-selected story		0.034 (0.023)
Source: RBC*Somewhat disapprove*Pre-selected story		0.053 (0.032)
Source: Critical*Somewhat approve*Pre-selected story		0.012 (0.025)
Source: State-controlled*Somewhat approve*Pre-selected story		0.025 (0.023)
Source: RBC*Somewhat approve*Pre-selected story		0.084 (0.032)**
Source: Critical*Certainly approve*Pre-selected story		−0.013 (0.036)
Source: State-controlled*Certainly approve*Pre-selected story		−0.011 (0.033)
Source: RBC*Certainly approve*Pre-selected story		−0.037 (0.045)
R^2	0.019	0.020
Adj. R^2	0.019	0.020
Num. obs.	198818	198818
RMSE	0.492	0.492
N Clusters	15626	15626

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Estimates from linear regressions with news story evaluations as dependent variables. Data from the social media sample. The reference category in presidential approval is 'Certainly disapprove.' The reference category in story content in Model 1 is 'Critical story.' The reference category in story content in Model 2 is 'Recent story.' Story and day fixed effects included. Heteroskedasticity-robust standard errors in parentheses (clustered on respondent).

Appendix E: Additional Evidence From the Nationally Representative Survey (Study 2)

For practical reasons, the study on a nationally representative sample included three news stories from the online survey (two of them were shown in two versions; see below) and only two news sources, assigned randomly with an approximately equal probability: *Channel One*, the main state-run television station, and *Echo of Moscow*, a liberal radio station/website. Respondents saw the logo of either *Channel One*, or *Echo of Moscow*, and interviewers emphasized the name of the news organization before each news story. After each vignette, respondents were asked to evaluate the truthfulness of the message on a scale from 0 to 3 (rescaled in the analysis to take values from 0 to 1).

The experimental vignettes and treatments were embedded in a nationally representative omnibus survey conducted monthly by a Russian polling firm, Levada Center. The omnibus survey uses in-home visits and relies on random sampling of the Russian population using a multi-stage sampling procedure (first randomly selecting urban and rural areas, then randomly selecting sampling stations within these primary sampling units, then randomly selecting households and individuals within households). The sample is stratified by sociodemographic characteristics based on the recent census data and on the recent demographic statistics, and weights are provided to further adjust for the discrepancies between the sample and the Russian population. The survey was fielded on August 22–28, 2019, covering 140 cities, towns, and rural settlements in 50 Russian regions. The sample size is 1608 respondents.

News Stories in the National Survey

Economic struggles, version 1 (the Russian statistical agency, Rosstat, is not mentioned). *For 80% of Russian families, it is difficult to buy all the necessary goods and "make ends meet". More than half of the families cannot replace the simplest furniture that falls into disrepair.*

Economic struggles, version 2 (Rosstat is mentioned). *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.* (This version implies that the government has admitted the problem.)

Ukrainian economy, version 1 (Russia is not mentioned). *The Ukrainian economy is growing at a slower rate than the world economy. According to analysts, in 2019, the world's GDP will grow by almost 4 percent, and the Ukrainian GDP by less than 3 percent.*

Ukrainian economy, version 2 (Russia is mentioned). *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.* (This version is more politicized by including a direct comparison with Russia.)

U.S. submarine. *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.* (This is a fake story fabricated by the Russian state propaganda.)

The Effect of State-Run Media, by Putin Approval

Figure E1 shows the estimated effect of changing the treatment from *Echo of Moscow* to *Channel One*. In the left panel, regime support is measured as respondent's vote choice in the last presidential election in order to account for the differences between different groups of Putin critics: liberal and pro-Western individuals, who are more likely to see the liberal-leaning *Echo of Moscow* as like-minded, and nationalists or communists. In the right panel, regime support is measured as approval of Vladimir Putin. Also see Table E1.

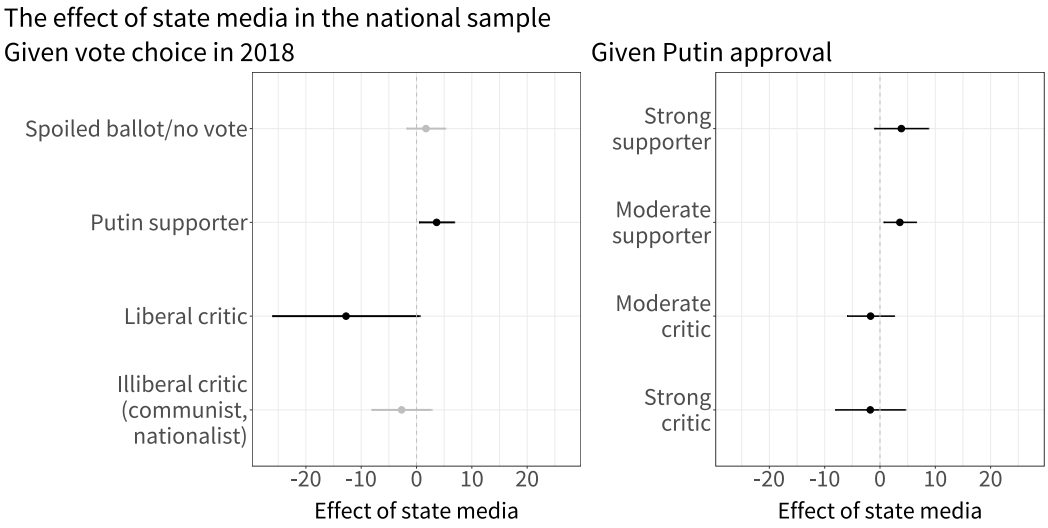

Figure E1: The effect of changing the treatment from critical (Echo of Moscow) to state-run (Channel One) media outlet on evaluations of news stories, by respondent's vote in the 2018 presidential election or by approval of Vladimir Putin. Calculations based on a linear regression of news story evaluations, accounting for state control, 2018 vote/Putin approval, and demographic covariates (see text for details); results from the national survey (Study 2). 95% confidence intervals are shown

Regression Table

Table E1: Treatment effect in the nationally representative survey

	Model 1	Model 2
Intercept	0.738^{***}	0.755^{***}
	(0.035)	(0.036)
Channel One	-0.018	-0.027
	(0.032)	(0.028)
Female	0.045^{***}	0.046^{***}
	(0.012)	(0.012)
Age	0.000	0.000
	(0.000)	(0.000)
Education	-0.008^{*}	-0.008
	(0.004)	(0.004)
Somewhat disapprove	0.019	
	(0.030)	
Somewhat approve	-0.041	
	(0.026)	
Certainly approve	-0.056	
	(0.030)	
Channel One*Somewhat disapprove	0.001	
	(0.039)	
Channel One*Somewhat approve	0.053	
	(0.036)	
Channel One*Certainly approve	0.056	
	(0.041)	
Voted liberal		0.086
		(0.049)
Voted for Putin		-0.067^{**}
		(0.025)
Spoiled ballot/no vote		-0.044
		(0.027)
Channel One*Liberal		-0.101
		(0.073)
Channel One*Putin		0.063^{*}
		(0.032)
Channel One*No vote		0.044
		(0.033)
R^2	0.186	0.185
Adj. R^2	0.182	0.181
Num. obs.	3302	3166
RMSE	0.301	0.302
N Clusters	1533	1473

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Estimates from linear regressions with news story evaluations as dependent variables. In Model 1, regime support is measured via presidential approval. In Model 2, regime support is measured via vote outcome in the 2018 presidential election. The reference category in presidential approval is 'Certainly disapprove.' The reference category in 2018 vote is 'Communist/nationalist.' Data from the Levada sample Story fixed effects included. Heteroskedasticity-robust standard errors in parentheses (clustered on respondent).

Appendix F: Additional Evidence From the OMI Online Panel (the Media Perceptions Survey, Study 3)

Questions About Individual News Sources

[*These questions were asked for the following news outlets: RT, Channel One, Russia-24, RIA*]

Would you say that these outlets provide a full sense of what is happening, do not ignore important topics or facts?

Mostly yes; Often ignore something important; Do not know the outlet well/difficult to say

Would you say that these outlets provide accurate and truthful information?

Mostly yes; Often provide false or inaccurate information; Do not know the outlet well/difficult to say

Would you say that these outlets are politically unbiased, convey information in a neutral fashion?

Mostly yes; Mostly convey information from the standpoint of the authorities; Mostly criticize the authorities; Do not know the outlet well/difficult to say

Would you say that these outlets are independent in their editorial policies, they themselves decide what and how to cover?

Mostly yes; The authorities decide for them; Do not know the outlet well/difficult to say

Media Usage Patterns

In all three surveys, I asked respondents to report the media outlets that they typically use to learn the news, and then I constructed dummy variables that indicate whether a respondent uses any of state-run television stations or any of critical news outlets. Then, I regressed these dummies on presidential approval and covariates, using the same model setup as with the analysis of media trust. Figure F1 plots the probabilities of using state-run television and foreign or critical media outlets across three samples.[47] Also see Table F1.

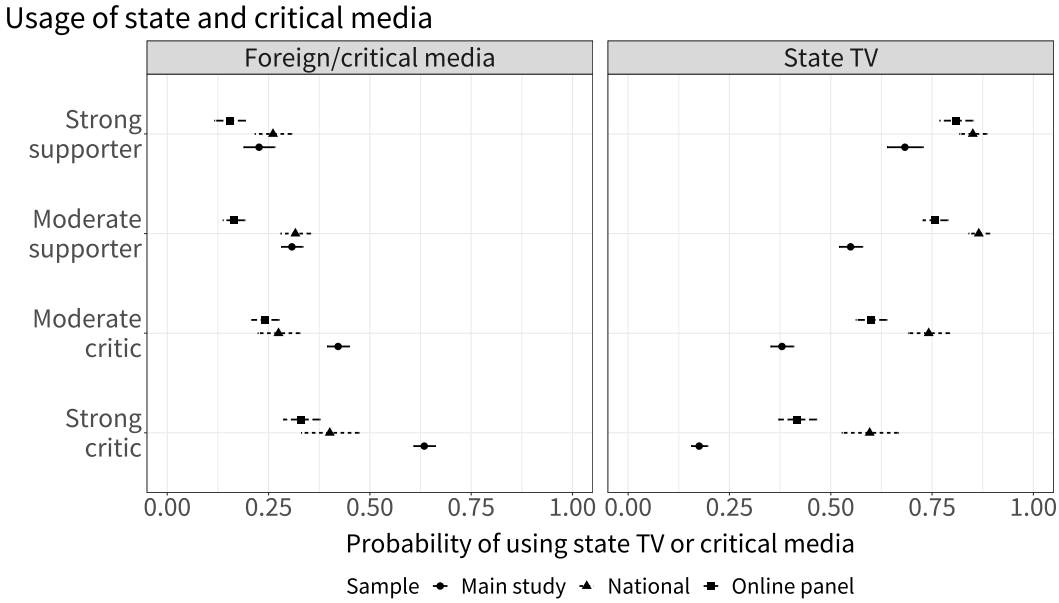

Figure F1: The probability of using critical media and state television, by approval of Vladimir Putin. Calculation based on linear regressions of media usage (dummy variables) on presidential approval and demographic covariates; results from the main study, from the nationally representative sample (Study 2), and from the OMI online panel (Study 3). 95% confidence intervals are shown

[47] In the Levada survey, the definition of critical media is somewhat different: instead of naming specific news outlets, respondents indicated the usage of online/cable television channels (*Rain* and *RBC*), business news outlets (most of which are editorially independent), and foreign websites. Combining these three categories, we can obtain an approximation for the usage of critical media, which, however, somewhat overstates it, as *RBC* and some other business news outlets are influenced by the government.

Knowledge of Critical Media and Trust in/Usage of State Media

Figure F2 shows the predicted probabilities of trust in state television and the usage of state television among supporters depending on whether they know of any critical news outlets or not (data from the OMI survey). The model builds on Figures 3.5 and F1, adding an interaction between approval and knowledge of critical media. Strong supporters trust state television a great deal regardless of their awareness of critical outlets. Moderate supporters who are aware of critical media may trust state television somewhat less, although the confidence intervals for two estimates overlap. The usage of state television similarly does not depend much on the knowledge of critical media.

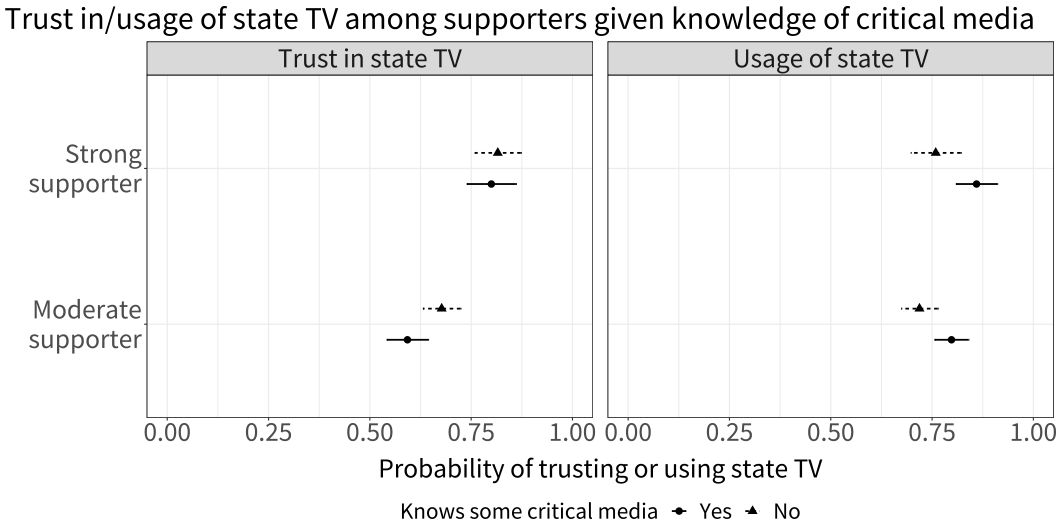

Figure F2: Probability of trusting or using state media depending on knowledge of critical media. Calculation based on a linear regression of media trust or media usage (dummy variables) on presidential approval, knowledge of critical media, and demographic covariates; results from the OMI online panel (Study 3). 95% confidence intervals are shown

Knowledge of Critical Media and the Evaluations of State Media

The models here are analogous to the analysis of perceptions of accuracy and media bias in the main text; in this case, I add an interaction between approval and knowledge of critical media and control for the knowledge of the state media outlet in question.

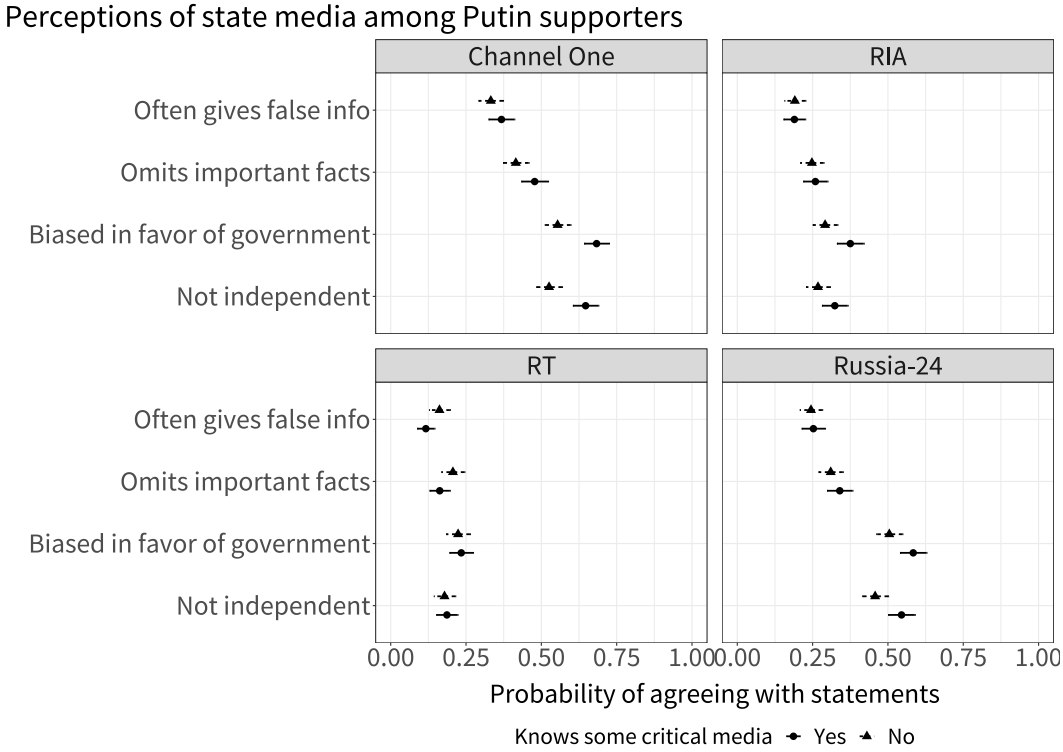

Figure F3: Probability that Putin supporters evaluate state media negatively along various dimensions. Calculations based on multinomial regressions of news source evaluations on knowledge of Echo of Moscow and covariates (see text for details); results from the OMI online panel (Study 3). 95% confidence intervals are shown

Regression Tables

Table F1: State and critical media usage

	Main study			OMI survey			National survey	
	State media	State TV	Critical	State media	State TV	Critical	State TV	Critical
Intercept	0.401***	0.070***	0.700***	0.506***	0.214***	0.249***	0.339***	0.468***
	(0.021)	(0.018)	(0.021)	(0.032)	(0.033)	(0.033)	(0.055)	(0.061)
Somewhat disapprove	0.202***	0.204***	−0.213***	0.149***	0.182***	−0.090***	0.146***	−0.127**
	(0.020)	(0.017)	(0.019)	(0.028)	(0.031)	(0.029)	(0.044)	(0.045)
Somewhat approve	0.323***	0.374***	−0.327***	0.223***	0.340***	−0.168***	0.269***	−0.085*
	(0.019)	(0.018)	(0.019)	(0.026)	(0.029)	(0.027)	(0.038)	(0.041)
Certainly approve	0.392***	0.508***	−0.408***	0.262***	0.392***	−0.177***	0.255***	−0.140***
	(0.025)	(0.025)	(0.024)	(0.027)	(0.032)	(0.030)	(0.040)	(0.043)
Age	0.002	0.016***	−0.008***	0.046***	0.058***	0.013	0.006***	−0.002**
	(0.003)	(0.003)	(0.003)	(0.006)	(0.007)	(0.007)	(0.001)	(0.001)
Female	0.009	0.042***	−0.124***	0.027	0.074***	−0.038*	0.027	−0.054*
	(0.015)	(0.014)	(0.015)	(0.016)	(0.020)	(0.018)	(0.020)	(0.025)
Education	0.035***	−0.002	0.125***	−0.015	−0.021	0.107***	−0.004	0.017*
	(0.011)	(0.011)	(0.011)	(0.017)	(0.020)	(0.017)	(0.007)	(0.008)
R^2	0.093	0.157	0.138	0.084	0.124	0.045	0.126	0.027
Adj. R^2	0.092	0.157	0.138	0.081	0.122	0.042	0.122	0.023
Num. obs.	14414	14414	14414	2114	2114	2114	1560	1541

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Estimates from a linear regression with state and independent media usage as dependent variables. Data from the main study, media perceptions survey (OMI), and the nationally representative survey (Levada). In the regressions for main study and for the OMI survey, education is dichotomized, and age is an ordinal measure. Heteroskedasticity-robust standard errors in parentheses.

Table F2: Trust in state and critical media

	State media	State TV	Critical
Intercept	0.500^{***}	0.173^{***}	0.292^{***}
	(0.033)	(0.032)	(0.030)
Somewhat disapprove	0.184^{***}	0.172^{***}	-0.118^{***}
	(0.030)	(0.028)	(0.028)
Somewhat approve	0.353^{***}	0.411^{***}	-0.236^{***}
	(0.027)	(0.027)	(0.025)
Certainly approve	0.427^{***}	0.583^{***}	-0.262^{***}
	(0.027)	(0.030)	(0.026)
Female	0.048^{**}	0.114^{***}	-0.036^{*}
	(0.017)	(0.020)	(0.015)
Age	0.015^{*}	0.013	0.001
	(0.006)	(0.008)	(0.006)
Higher education	-0.065^{***}	-0.078^{***}	0.073^{***}
	(0.017)	(0.020)	(0.015)
R^2	0.142	0.178	0.079
Adj. R^2	0.140	0.176	0.077
Num. obs.	2114	2114	2114

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Estimates from a linear regression with trust in state and independent media as dependent variables. Data from the OMI survey (media perceptions survey). Heteroskedasticity-robust standard errors in parentheses.

Table F3: State and critical media evaluations: Completeness

	RT	Channel 1	Russia-24	RIA
Y: Intercept	−0.216 (0.168)	1.869 (0.313)***	1.499 (0.270)***	0.163 (0.171)
Y: Critic	−0.730 (0.113)***	−2.115 (0.214)***	−1.595 (0.181)***	−0.584 (0.114)***
Y: Female	−0.918 (0.110)***	0.368 (0.198)	0.188 (0.176)	−0.238 (0.112)*
Y: Age	0.042 (0.042)	0.319 (0.082)***	0.340 (0.073)***	0.113 (0.043)**
Y: Higher education	0.333 (0.112)**	−0.480 (0.201)*	−0.219 (0.178)	0.261 (0.113)*
N: Intercept	−0.732 (0.177)***	1.565 (0.302)***	0.930 (0.268)***	−0.493 (0.179)**
N: Critic	0.588 (0.113)***	−0.370 (0.203)	0.115 (0.178)	0.730 (0.114)***
N: Female	−0.869 (0.112)***	0.044 (0.186)	−0.136 (0.170)	−0.560 (0.113)***
N: Age	−0.038 (0.043)	0.317 (0.078)***	0.280 (0.071)***	0.160 (0.044)***
N: Higher education	0.409 (0.114)***	0.037 (0.190)	0.183 (0.173)	0.270 (0.114)*
AIC	4194.789	3242.922	3495.025	4430.072
BIC	4251.353	3299.486	3551.588	4486.635
Log Likelihood	−2087.395	−1611.461	−1737.513	−2205.036
Deviance	4174.789	3222.922	3475.025	4410.072
Num. obs.	2114	2114	2114	2114
K	3	3	3	3

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Estimates from multinomial regressions with media evaluations as dependent variables. Outcomes: Mostly complete (Y in the table), Omits important information (N in the table), and Hard to say (reference category). Data from the OMI survey (media perceptions survey). Standard errors in parentheses.

Table F4: State and critical media evaluations: Accuracy

	RT	Channel 1	Russia-24	RIA
Y: Intercept	−0.035 (0.162)	1.956 (0.310)***	1.609 (0.264)***	0.280 (0.165)
Y: Critic	−0.613 (0.108)***	−1.849 (0.206)***	−1.299 (0.173)***	−0.437 (0.110)***
Y: Female	−0.960 (0.106)***	0.041 (0.199)	−0.071 (0.173)	−0.239 (0.108)*
Y: Age	0.032 (0.040)	0.355 (0.082)***	0.303 (0.070)***	0.067 (0.042)
Y: Higher education	0.357 (0.108)***	−0.498 (0.203)*	−0.161 (0.174)	0.294 (0.109)**
N: Intercept	−0.995 (0.189)***	1.396 (0.304)***	0.841 (0.268)**	−0.836 (0.187)***
N: Critic	0.972 (0.122)***	0.126 (0.199)	0.633 (0.175)***	1.018 (0.120)***
N: Female	−0.964 (0.118)***	−0.261 (0.191)	−0.489 (0.172)**	−0.592 (0.117)***
N: Age	−0.062 (0.045)	0.297 (0.080)***	0.226 (0.070)**	0.152 (0.045)***
N: Higher education	0.576 (0.120)***	0.029 (0.195)	0.128 (0.173)	0.290 (0.118)*
AIC	4158.796	3230.442	3436.410	4391.247
BIC	4215.359	3287.006	3492.974	4447.811
Log Likelihood	−2069.398	−1605.221	−1708.205	−2185.624
Deviance	4138.796	3210.442	3416.410	4371.247
Num. obs.	2114	2114	2114	2114
K	3	3	3	3

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Estimates from multinomial regressions with media evaluations as dependent variables. Outcomes: Mostly accurate (Y in the table), Often gives false information (N in the table), and Hard to say (reference category). Data from the OMI survey (media perceptions survey). Standard errors in parentheses.

Table F5: State and critical media evaluations: Independence

	RT	Channel 1	Russia-24	RIA
Y: Intercept	−0.072 (0.166)	1.278 (0.283)***	1.344 (0.259)***	−0.015 (0.175)
Y: Critic	−0.605 (0.112)***	−1.597 (0.201)***	−1.369 (0.177)***	−0.548 (0.118)***
Y: Female	−0.853 (0.109)***	−0.138 (0.186)	−0.252 (0.170)	−0.340 (0.115)**
Y: Age	0.019 (0.042)	0.204 (0.075)**	0.163 (0.067)*	0.082 (0.044)
Y: Higher education	0.365 (0.111)**	−0.551 (0.190)**	−0.361 (0.172)*	0.142 (0.116)
N: Intercept	−0.757 (0.176)***	1.437 (0.257)***	1.347 (0.241)***	−0.473 (0.169)**
N: Critic	0.869 (0.113)***	0.356 (0.164)*	0.463 (0.153)**	0.740 (0.107)***
N: Female	−0.955 (0.111)***	−0.193 (0.165)	−0.453 (0.155)**	−0.438 (0.107)***
N: Age	−0.016 (0.042)	0.250 (0.067)***	0.187 (0.061)**	0.158 (0.041)***
N: Higher education	0.525 (0.113)***	−0.114 (0.169)	−0.006 (0.157)	0.129 (0.108)
AIC	4273.702	3009.900	3356.703	4444.885
BIC	4330.265	3066.463	3413.267	4501.448
Log Likelihood	−2126.851	−1494.950	−1668.352	−2212.442
Deviance	4253.702	2989.900	3336.703	4424.885
Num. obs.	2114	2114	2114	2114
K	3	3	3	3

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Estimates from multinomial regressions with media evaluations as dependent variables. Outcomes: Mostly independent from authorities (Y in the table), Not independent (N in the table), and Hard to say (reference category). Data from the OMI survey (media perceptions survey). Standard errors in parentheses.

Table F6: State and critical media evaluations: Political bias

	RT	Channel 1	Russia-24	RIA
Anti: Intercept	−2.735 (0.410)***	−1.039 (0.619)	−1.176 (0.592)*	−3.313 (0.456)***
Anti: Critic	−0.020 (0.256)	−0.347 (0.397)	0.035 (0.398)	0.152 (0.276)
Anti: Female	−0.708 (0.258)**	0.542 (0.421)	−0.304 (0.395)	0.035 (0.280)
Anti: Age	0.049 (0.098)	−0.188 (0.174)	−0.076 (0.168)	0.197 (0.105)
Anti: Higher education	0.552 (0.270)*	−0.166 (0.399)	−0.298 (0.398)	0.381 (0.290)
Y: Intercept	−0.186 (0.176)	1.545 (0.308)***	1.232 (0.278)***	−0.041 (0.179)
Y: Critic	−0.741 (0.118)***	−1.710 (0.211)***	−1.294 (0.186)***	−0.412 (0.118)***
Y: Female	−0.951 (0.116)***	−0.064 (0.201)	−0.143 (0.184)	−0.392 (0.117)***
Y: Age	0.037 (0.044)	0.182 (0.082)*	0.247 (0.074)***	0.074 (0.046)
Y: Higher education	0.413 (0.117)***	−0.310 (0.202)	−0.176 (0.183)	0.201 (0.119)
Pro: Intercept	−0.387 (0.171)*	1.614 (0.284)***	1.245 (0.261)***	−0.448 (0.170)**
Pro: Critic	0.467 (0.110)***	−0.130 (0.184)	0.093 (0.169)	0.470 (0.108)***
Pro: Female	−1.106 (0.110)***	−0.222 (0.181)	−0.421 (0.170)*	−0.500 (0.108)***
Pro: Age	−0.024 (0.042)	0.300 (0.075)***	0.311 (0.069)***	0.218 (0.042)***
Pro: Higher education	0.541 (0.112)***	0.184 (0.182)	0.264 (0.169)	0.139 (0.109)
AIC	4714.292	3222.130	3592.227	4900.644
BIC	4799.137	3306.975	3677.072	4985.489
Log Likelihood	−2342.146	−1596.065	−1781.113	−2435.322
Deviance	4684.292	3192.130	3562.227	4870.644
Num. obs.	2114	2114	2114	2114
K	4	4	4	4

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Estimates from multinomial regressions with media evaluations as dependent variables. Outcomes: Mostly neutral (Y in the table), Anti-government (Anti in the table), Pro-government (Pro in the table), and Hard to say (reference category). Data from the OMI survey (media perceptions survey). Standard errors in parentheses.

Appendix G: Additional Evidence for the Analysis of Fake News Recognition

Descriptive Statistics for Different Samples

Table G1: Summary statistics for the main study and the OMI survey

	2020		2019 (Facebook)		2019 (VK)		OMI	
Variable	%	Non-missing	%	Non-missing	%	Non-missing	%	Non-missing
Approve of president	40.9	15533	NA	NA	NA	NA	76.3	1766
Media: Neither state nor critical	20.5	19017	26.4	32312	35.0	2860	17.6	2239
Media: Only/mostly critical	18.1	19017	15.9	32312	7.5	2860	3.4	2239
Media: Only/mostly state-run	22.4	19017	21.5	32312	21.1	2860	36.0	2239
Media: State and critical	21.5	19017	18.4	32312	10.7	2860	10.4	2239
Media: State TV	17.6	19017	17.8	32312	25.7	2860	32.6	2239
Age 18-24	5.4	17783	7.0	31005	34.1	2646	11.6	2239
Age 25-34	19.4	17783	24.0	31005	22.6	2646	25.6	2239
Age 35-44	23.6	17783	23.6	31005	15.2	2646	30.6	2239
Age 45-54	22.3	17783	23.7	31005	14.4	2646	14.5	2239
Age 55-64	20.6	17783	15.8	31005	10.8	2646	14.0	2239
Age 65+	8.7	17783	5.8	31005	3.0	2646	3.6	2239
Female	58.6	17452	66.3	30853	55.8	2631	50.4	2239
Higher education	81.3	17411	85.9	30695	63.4	2593	57.4	2239

Note: The percent of respondents in each category. Calculation of means is limited to respondents with non-missing data on media usage. The 2019 sample is split into respondents recruited from Facebook and from VK.

News Story Lists and Evaluation Accuracy for Individual Stories

Table G2: News messages evaluated in the main study (2020)

Code	Text	False?	Direction	Accuracy
1	A man in Britain pretended to be deaf for 62 years to avoid listening to his "too talkative" wife	FALSE	Neutral	0.419
2	Because of sanctions against Russia, the European Union has lost 500 billion euros	FALSE	Propaganda-consistent	0.507
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	0.249
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	0.446
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	0.390
6	A biology student from the University of Miami crossbred strawberries with marijuana, fulfilling his old dream	FALSE	Neutral	0.641
7	Trump thanked Putin for the oil deal and said that "he acted like a real gentleman"	TRUE	Propaganda-consistent	0.520
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	0.400
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	0.815
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	0.570
11	Russia is again bringing in uranium waste from Germany. In the 2000s, this practice was stopped after protests	TRUE	Propaganda-inconsistent	0.574
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	0.705

13	In case of war with the U.S., Russia could be destroyed in three hours, Chinese military analysts calculated	FALSE	Propaganda-inconsistent	0.658
14	Putin signs a new law that gives him lifetime immunity and the right to be a lifetime senator	TRUE	Propaganda-inconsistent	0.262
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	0.731
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	0.826
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	0.471
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	0.804
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	0.393
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	0.758
21	Documents confirming Trump's links to Russia were obtained from the Deutsche Bank	FALSE	Propaganda-inconsistent	0.781
22	In California, the words "husband," "wife," "groom," and "bride" are banned because of same-sex marriages	FALSE	Propaganda-consistent	0.356
23	Russia adjusts the date of the ending of the Second World War. It will be September 3 now	TRUE	Propaganda-inconsistent	0.480
24	The Central Bank burns one ton of banknotes with denominations of 100 and 500 rubles that were infected by the coronavirus	FALSE	Neutral	0.895

25	Russian banks moved some employees to work and live in the office. They are promised higher salaries and bonuses	TRUE	Neutral	0.369
26	The number of Ukrainians who positively perceive Russia has increased by 50% in three years	TRUE	Propaganda-consistent	0.434
27	The State Duma adopts in the first reading a law that will ban giving human names to animals	FALSE	Neutral	0.877
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	0.722
29	Putin awards Kim Jong Un with a medal "75 years of victory in the Great Patriotic War"	TRUE	Propaganda-inconsistent	0.508
30	In Tuva, a man was rescued from a bear's den where he spent a month with a broken spine	FALSE	Neutral	0.506
31	Zhirinovsky suggests testing the coronavirus vaccine on prisoners	TRUE	Neutral	0.606
32	The wealth of the richest Americans has grown by $434 billion since March, an analysis of the Forbes ranking shows	TRUE	Neutral	0.635
33	For the second time, Poroshenko did not arrive for questioning in an investigation about the illegal import of paintings	TRUE	Propaganda-consistent	0.784
34	Merkel refuses to go to Washington for a G7 summit	TRUE	Neutral	0.544
35	Obama's former aide suspects Russia is connected to riots in the U.S.	TRUE	Propaganda-consistent	0.765
36	Hitler's house in Austria will become a police station	TRUE	Neutral	0.489
37	U.S. Attorney General says "foreign forces" intervene in protests in America to escalate violence	TRUE	Propaganda-consistent	0.746
38	A powerful landslide in Norway washes eight houses into the sea	TRUE	Neutral	0.773
39	Brazil threatens to leave WHO because of "ideological bias"	TRUE	Neutral	0.597
40	Canada's prime minister bends a knee at an anti-racist rally	TRUE	Neutral	0.699
41	In Lviv, a MiG-29 that had arrived for modernization was plundered for parts	TRUE	Propaganda-consistent	0.460
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	0.598
43	Peskov says there are no oligarchs in Russia	TRUE	Neutral	0.611
44	In London, archeologists find the ruins of the first British theatre	TRUE	Neutral	0.689

45	Ukraine gets the status of NATO enhanced opportunity partner	TRUE	Propaganda-inconsistent	0.448
46	In May, the Polish military occupied a part of the Czech Republic. Poland explains it was an "accident" and a "misunderstanding"	TRUE	Neutral	0.240
47	Kyrgyz prime minister resigns over the radio frequency sale scandal	TRUE	Neutral	0.409
48	A passenger on a train in Switzerland forgot a bag of gold in a car	TRUE	Neutral	0.412
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	0.635
50	Protesters in New York poisoned policemen with milkshakes with added bleach	FALSE	Propaganda-consistent	0.846

Note: The last column presents the proportion of those who evaluated the corresponding story as true. 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. See the text for details.

Table G3: News messages evaluated in the main study (2019)

Code	Text	False?	Direction	Accuracy
1	Because of the sanctions, the European economy has lost 500 billion euros	FALSE	Propaganda-consistent	0.412
2	Trump urged Americans to boycott Chinese goods and "just buy everything at Wal-Mart"	FALSE	Neutral	0.240
3	A U.S. submarine got stuck in the ice while rehearsing "strikes against Russia"	FALSE	Propaganda-consistent	0.708
4	In a survey in the U.S., 57% said they are against teaching Arabic numerals in schools	TRUE	Propaganda-consistent	0.432
5	A Russian has been able to live for 60 years with only one of his brain hemispheres	TRUE	Neutral	0.467
6	Since 2002, Putin's wage has increased 12-fold	TRUE	Propaganda-inconsistent	0.572
7	In the Russian version of the movie Hellboy, Stalin was replaced with Hitler	TRUE	Propaganda-inconsistent	0.301

8	In the Komi province, books published by the Soros Foundation were burnt because of being "alien to the Russian ideology"	TRUE	Propaganda-inconsistent	0.560
9	The Ukrainian economy has been growing faster than the Russian economy for four years now	TRUE	Propaganda-inconsistent	0.298
10	In Orenburg, a retiree died in the circus arena while executing instructions by clowns	TRUE	Neutral	0.571
11	In Tuva, a man was saved from a bear's den, where he had spent a month with a broken spine	FALSE	Neutral	0.587
12	A company in Tatarstan has promised to pay 100 rubles per day to any woman who wears a skirt at work	TRUE	Neutral	0.614
13	The Russian statistical agency has established that 80% of Russian families have difficulties with buying the necessary goods	TRUE	Propaganda-inconsistent	0.792
14	Bill Gates, Microsoft's founder, complained that taxes are too low	TRUE	Neutral	0.337
15	A British man pretended to be deaf for 62 years to avoid listening to his "annoyingly talkative" wife	FALSE	Neutral	0.318
16	In May, unknown persons stole a bridge in the Murmansk province	TRUE	Neutral	0.514
17	In California, the words "husband," "wife," "groom," and "bride" are banned because of same-sex marriages	FALSE	Propaganda-consistent	0.301
18	In Kalmykia, a teacher sealed students' mouths with a sticky tape to "ensure discipline in class"	TRUE	Neutral	0.796
19	In Crimea, Americans attended a demonstration holding a banner saying "No to NATO"	TRUE	Propaganda-consistent	0.170
20	In the U.S., an 11-year-old student was arrested for refusing to pledge allegiance to the flag	FALSE	Propaganda-consistent	0.736
21	Amateur divers have found a World War II German submarine in Lake Ontario	FALSE	Neutral	0.598
22	A biologist from the University of Miami was able to cross the marijuana plant with strawberries	FALSE	Neutral	0.543
23	The president of Ukraine urged bureaucrats to eat shawarma "to be closer to the people"	TRUE	Neutral	0.605
24	Trump signed Bibles for tornado victims	TRUE	Neutral	0.554
25	British human rights activists called on the Russian government to release prisoners from Siberian prisons because of forest fires	FALSE	Neutral	0.505

26	An Irish photographer sold a photo of a potato for a million dollars	TRUE	Neutral	0.545
27	A senator said that the U.S. needs space forces to fight space pirates	TRUE	Neutral	0.448
28	In Astrakhan, bailiffs extracted a debtor out of a grave	TRUE	Neutral	0.281
29	The Central Bank officials said that Russian fairy tales "need to be changed" because they "teach children to be freeloaders"	TRUE	Neutral	0.605
30	Killer whales attacked a whaler on the coast of Japan, 16 seamen are dead	FALSE	Neutral	0.711
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	0.700
32	In Magadan, citizens would be fined for feeding pigeons	TRUE	Neutral	0.627

Note: The last column presents the proportion of those who evaluated the corresponding story as true. Stories 1-16 included in the first quiz, stories 17-32 included in the second quiz. See the text for details.

News Stories in the OMI Survey

As discussed above, I conducted another survey in which I asked citizens to evaluate news stories. It was fielded via the polling company OMI, which maintains a large online panel of respondents across Russia. In the survey, respondents evaluated the truthfulness of four news stories, which generally were longer versions than the stories in the main study (see Table G4). As in the main study, 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.

Figure G2 reports the differences in accuracy between Putin supporters and critics in the main study and in the OMI survey with respect to four stories included in the OMI survey.

Table G4: News messages evaluated in the OMI survey

Text	False?	Code in the main (2020) survey
The American leader Donald Trump weighed in on the relations between the United 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"	TRUE	7
A new study published by the U.S. National Academy of Sciences says that the first 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	FALSE	10
Russia is again bringing in uranium waste from Germany. In the 2000s, this practice was stopped after protests, but it resumed in 2019. In total, 12 thousand tons of such waste are expected to be sent to Russia	TRUE	11

In Italy, because of the pandemic, several dozens of mafia bosses will be let out of 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	TRUE	19

Additional Figures

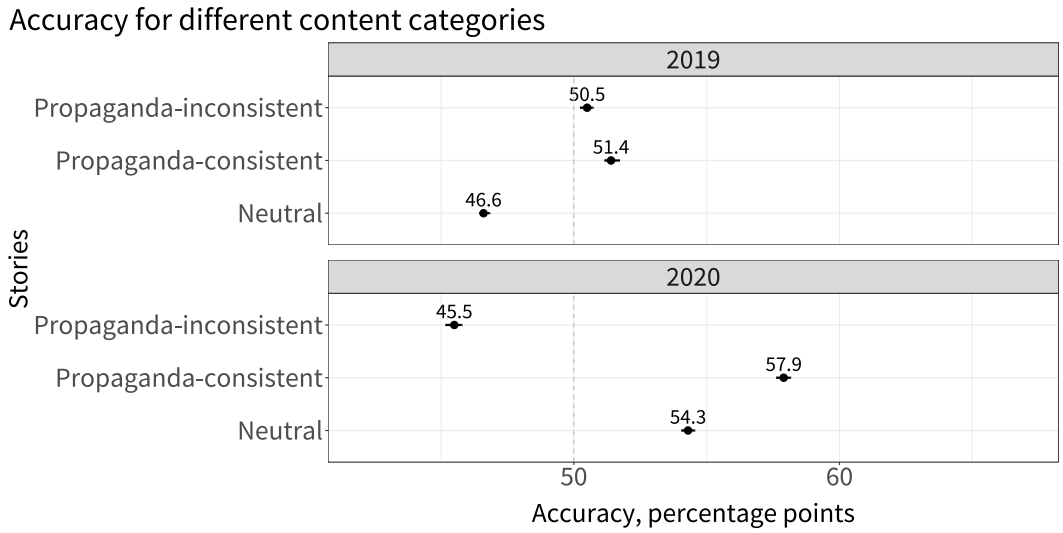

Figure G1: The percent of respondents that correctly recognized news stories as false or true. The estimates are coefficients and 95% confidence intervals from linear regressions

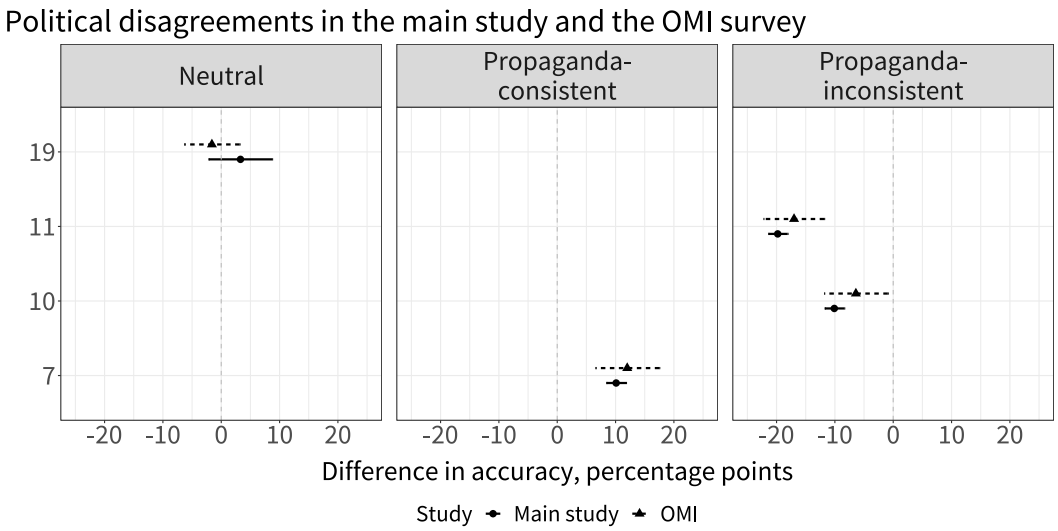

Figure G2: Difference in accuracy rates for Putin supporters and critics given the political direction of news stories. Differences and 95% confidence intervals calculated from linear regressions of correct response on Putin approval, story labels, and covariates. Results from the main study (the 2020 survey) and from the OMI survey. Numbers on the vertical axis are story codes from the list of stories in the main study

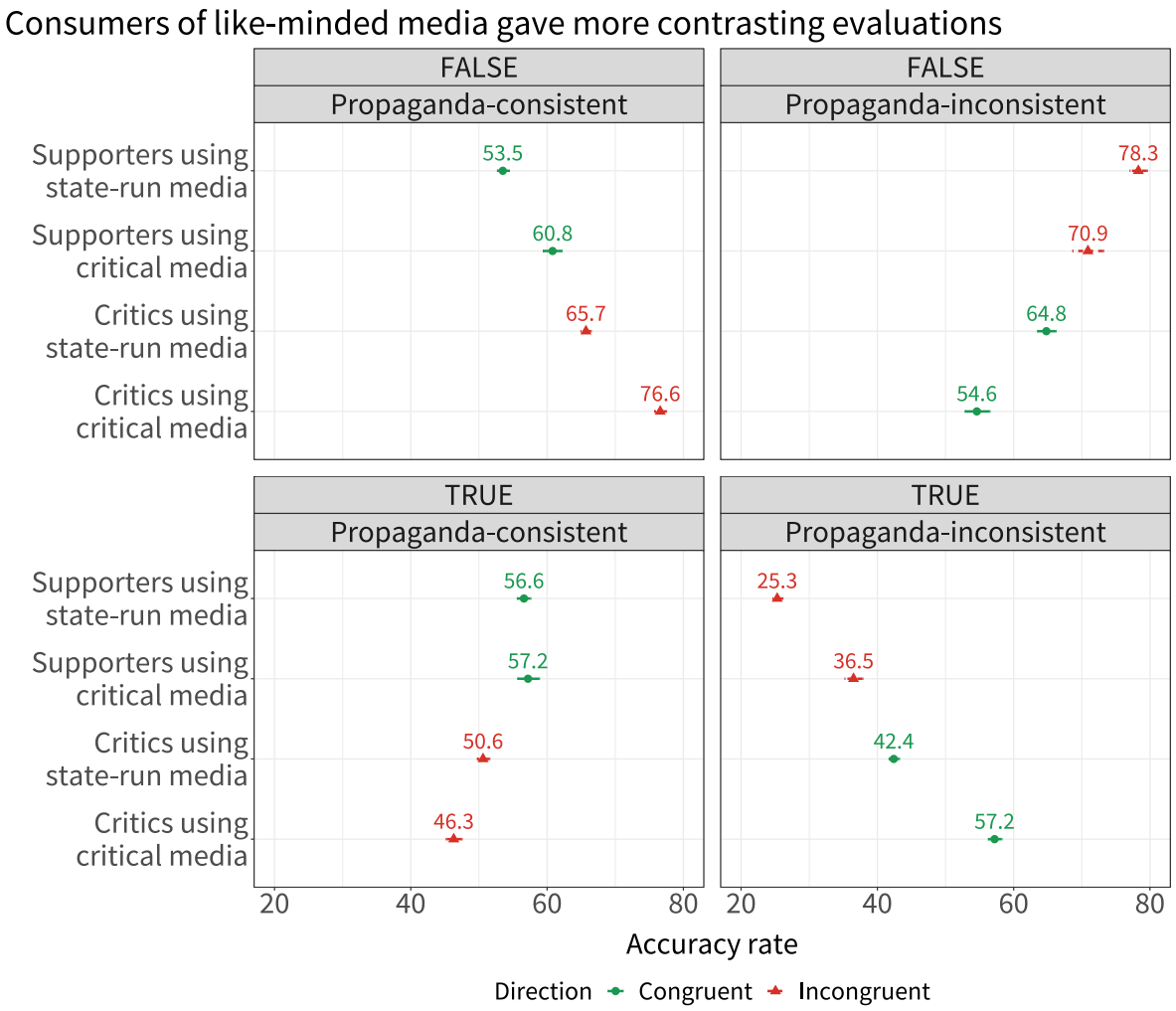

Figure G3: Accuracy rates for Putin supporters and critics given media usage and the characteristics of news stories. Differences and 95% confidence intervals calculated from the 2020 survey data

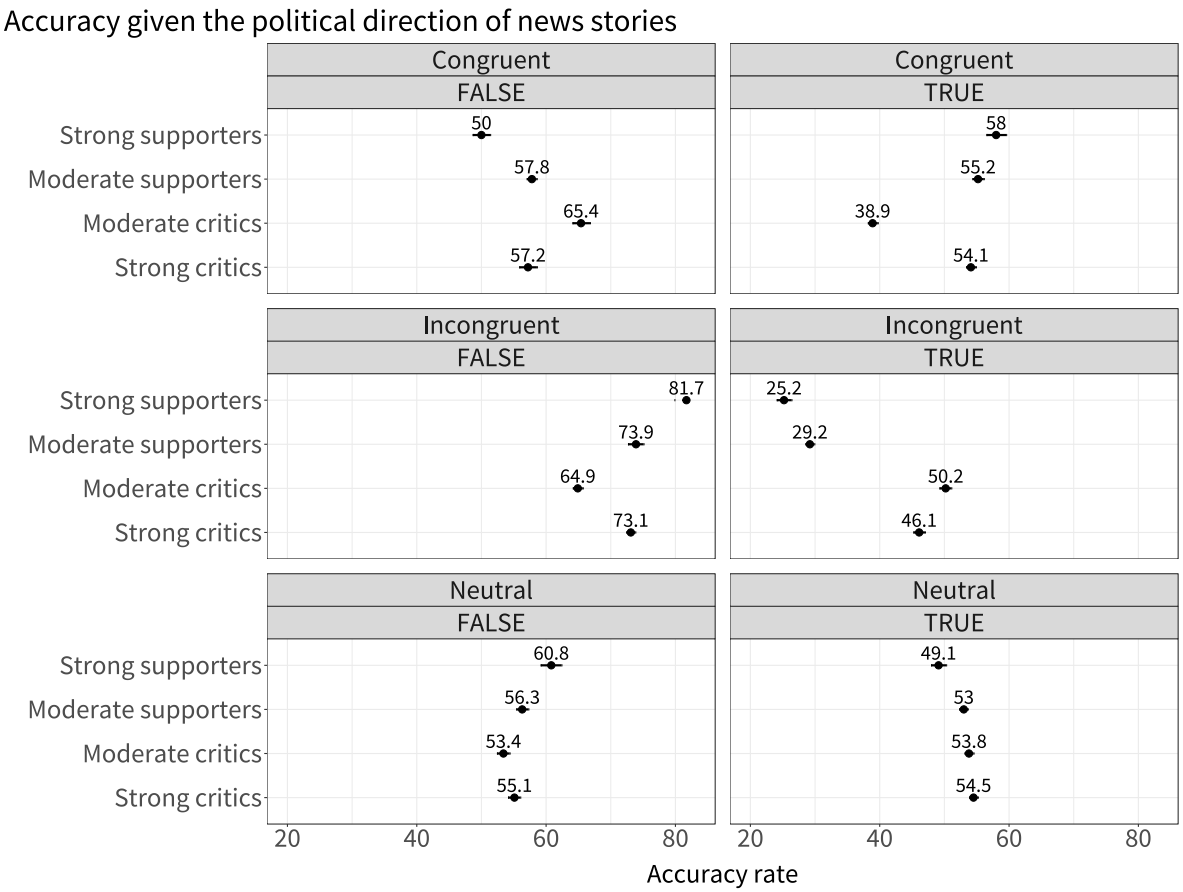

Figure G4: Accuracy rates for Putin supporters and critics given the characteristics of news stories. Differences and 95% confidence intervals calculated from the 2020 survey data

Regression Tables

Table G5: Baseline accuracy in the main study

	2020	2019	2020	2019	2020	2019
(Intercept)	0.532***	0.487***				
	(0.001)	(0.001)				
Neutral			0.543***	0.466***		
			(0.001)	(0.001)		
Propaganda-consistent			0.579***	0.514***		
			(0.001)	(0.001)		
Propaganda-inconsistent			0.455***	0.505***		
			(0.002)	(0.001)		
True					0.481***	0.497***
					(0.001)	(0.001)
False					0.613***	0.465***
					(0.001)	(0.001)
Num.Obs.	385 468	632 717	385 468	632 717	385 468	632 717

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

Note: Coefficients from linear regression models. Standard errors clustered on respondent in parentheses.

Table G6: Accuracy given media usage

	2020	2019	2020	2019	2020	OMI
(Intercept)	0.388***	0.479***	0.385***	0.474***	0.475***	0.520***
	(0.007)	(0.006)	(0.007)	(0.006)	(0.016)	(0.024)
Media: Only/mostly critical	0.051***	0.075***	0.058***	0.077***	0.109***	0.125***
	(0.003)	(0.002)	(0.004)	(0.003)	(0.007)	(0.035)
Media: Only/mostly state-run	−0.008**	−0.031***	−0.005	−0.020***	−0.007	−0.005
	(0.003)	(0.002)	(0.004)	(0.003)	(0.007)	(0.015)
Media: State and critical	0.026***	0.027***	0.036***	0.037***	0.070***	0.046*
	(0.003)	(0.002)	(0.004)	(0.003)	(0.007)	(0.020)
Media: State TV	−0.022***	−0.041***	−0.029***	−0.038***	−0.042***	−0.047**
	(0.003)	(0.002)	(0.004)	(0.003)	(0.007)	(0.016)
Age: 25-34	−0.013**	−0.001	−0.013**	−0.001	0.009	0.011
	(0.004)	(0.003)	(0.004)	(0.003)	(0.011)	(0.019)
Age: 35-44	−0.016***	−0.007*	−0.016***	−0.007*	0.016	0.018
	(0.004)	(0.003)	(0.004)	(0.003)	(0.010)	(0.019)
Age: 45-54	−0.014**	−0.012***	−0.014**	−0.012***	0.018+	0.001
	(0.005)	(0.003)	(0.005)	(0.003)	(0.011)	(0.021)
Age: 55-64	−0.010*	−0.018***	−0.010*	−0.018***	0.023*	0.021
	(0.005)	(0.003)	(0.005)	(0.003)	(0.011)	(0.021)
Age: 65+	−0.009+	−0.027***	−0.009+	−0.027***	0.022+	0.011
	(0.005)	(0.004)	(0.005)	(0.004)	(0.012)	(0.031)
Education	0.007**	0.012***	0.007**	0.012***	0.035***	0.053***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.005)	(0.011)
Female	−0.035***	−0.020***	−0.035***	−0.020***	−0.068***	−0.060***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.011)
False	0.144***	−0.039***	0.152***	−0.023***		
	(0.002)	(0.002)	(0.005)	(0.003)		
Propaganda-consistent	−0.001	0.062***	−0.001	0.062***		
	(0.002)	(0.002)	(0.002)	(0.002)		
Propaganda-inconsistent	−0.077***	0.031***	−0.077***	0.031***		
	(0.002)	(0.002)	(0.002)	(0.002)		
Quiz 2	0.092***	0.074***	0.092***	0.074***		
	(0.003)	(0.003)	(0.003)	(0.003)		
Media: Only/mostly critical*False			−0.018*	−0.008		
			(0.007)	(0.005)		
Media: Only/mostly state-run*False			−0.009	−0.033***		
			(0.007)	(0.004)		
Media: State and critical*False			−0.027***	−0.032***		
			(0.007)	(0.005)		
Media: State TV*False			0.019**	−0.010*		
			(0.007)	(0.005)		
Num.Obs.	295 523	572 899	295 523	572 899	52 278	8418
Stories	All	All	All	All	OMI stories	OMI stories

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

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. In Column 5, the analysis is limited to 4 stories included in the OMI survey. The OMI model controls for assigned news sources and story fixed effects.

Table G7: Accuracy given the number of news sources one uses

	2020	2019
(Intercept)	0.391***	0.500***
	(0.007)	(0.007)
Sources used: 1	0.002	0.000
	(0.004)	(0.004)
Sources used: 2-4	0.010**	0.004
	(0.004)	(0.004)
Sources used: 5+	0.022***	0.012**
	(0.004)	(0.004)
Age: 25-34	−0.018***	−0.008**
	(0.004)	(0.003)
Age: 35-44	−0.027***	−0.023***
	(0.004)	(0.003)
Age: 45-54	−0.024***	−0.029***
	(0.005)	(0.003)
Age: 55-64	−0.021***	−0.034***
	(0.005)	(0.003)
Age: 65+	−0.018***	−0.039***
	(0.005)	(0.004)
Education	0.011***	0.022***
	(0.002)	(0.002)
Female	−0.043***	−0.029***
	(0.002)	(0.002)
False	0.144***	−0.039***
	(0.002)	(0.002)
Propaganda-consistent	−0.001	0.062***
	(0.002)	(0.002)
Propaganda-inconsistent	−0.077***	0.031***
	(0.002)	(0.002)
Quiz 2	0.093***	0.076***
	(0.003)	(0.003)
Num.Obs.	299 812	584 632

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

Note: Coefficients from linear regression models. Standard errors clustered on respondent in parentheses. Reference categories are as follows. Sources used: 0 sources. Age: 18-24.

Table G8: Accuracy given presidential approval and the direction of news stories

	1
(Intercept)	0.432 (0.011)***
Approval	−0.002 (0.004)
Media: Only/mostly critical	0.046 (0.003)***
Media: Only/mostly state-run	0.000 (0.003)
Media: State and critical	0.028 (0.003)***
Media: State TV	−0.011 (0.003)***
Age: 25-34	−0.011 (0.005)*
Age: 35-44	−0.013 (0.005)**
Age: 45-54	−0.015 (0.005)**
Age: 55-64	−0.005 (0.005)
Age: 65+	−0.005 (0.005)
Education	0.009 (0.003)***
Female	−0.036 (0.002)***
False	0.035 (0.005)***
Propaganda-consistent	−0.063 (0.004)***
Propaganda-inconsistent	−0.058 (0.004)***
Quiz 2	0.095 (0.003)***
Approval*Propaganda-consistent	0.098 (0.006)***
Approval*Propaganda-inconsistent	−0.167 (0.006)***
Approval*False	0.048 (0.008)***
False*Propaganda-consistent	0.197 (0.006)***
False*Propaganda-inconsistent	0.092 (0.008)***
Approval*False*Propaganda-consistent	−0.257 (0.010)***
Approval*False*Propaganda-inconsistent	0.284 (0.012)***
Num.Obs.	243 387

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.

Table G9: Accuracy given presidential approval, media usage, and the direction of news stories

	1
(Intercept)	0.453 (0.012)***
Approval+Media usage: Critics+non-like-minded	0.004 (0.006)
Approval+Media usage: Other	−0.003 (0.007)
Approval+Media usage: Supporters+like-minded	−0.027 (0.007)***
Approval+Media usage: Supporters+non-like-minded	0.003 (0.008)
Age: 25-34	−0.013 (0.005)**
Age: 35-44	−0.016 (0.005)***
Age: 45-54	−0.019 (0.005)***
Age: 55-64	−0.009 (0.005)+
Age: 65+	−0.009 (0.005)+
Education	0.010 (0.003)***
Female	−0.038 (0.002)***
False	0.041 (0.009)***
Propaganda-consistent	−0.084 (0.008)***
Propaganda-inconsistent	0.043 (0.007)***
Quiz 2	0.095 (0.003)***
Approval+Media usage: Critics+non-like-minded*Propaganda-consistent	0.043 (0.010)***
Approval+Media usage: Other*Propaganda-consistent	0.022 (0.010)*
Approval+Media usage: Supporters+like-minded*Propaganda-consistent	0.138 (0.010)***
Approval+Media usage: Supporters+non-like-minded*Propaganda-consistent	0.107 (0.013)***
Approval+Media usage: Critics+non-like-minded*Propaganda-inconsistent	−0.145 (0.009)***
Approval+Media usage: Other*Propaganda-inconsistent	−0.198 (0.010)***
Approval+Media usage: Supporters+like-minded*Propaganda-inconsistent	−0.284 (0.009)***
Approval+Media usage: Supporters+non-like-minded*Propaganda-inconsistent	−0.213 (0.012)***
Approval+Media usage: Critics+non-like-minded*False	−0.011 (0.011)
Approval+Media usage: Other*False	0.000 (0.012)
Approval+Media usage: Supporters+like-minded*False	0.070 (0.012)***
Approval+Media usage: Supporters+non-like-minded*False	0.003 (0.015)
False*Propaganda-consistent	0.284 (0.011)***
False*Propaganda-inconsistent	−0.083 (0.015)***
Approval+Media usage: Critics+non-like-minded*False*Propaganda-consistent	−0.140 (0.015)***
Approval+Media usage: Other*False*Propaganda-consistent	−0.146 (0.016)***
Approval+Media usage: Supporters+like-minded*False*Propaganda-consistent	−0.401 (0.015)***
Approval+Media usage: Supporters+non-like-minded*False*Propaganda-consistent	−0.269 (0.020)***
Approval+Media usage: Critics+non-like-minded*False*Propaganda-inconsistent	0.257 (0.018)***
Approval+Media usage: Other*False*Propaganda-inconsistent	0.330 (0.020)***
Approval+Media usage: Supporters+like-minded*False*Propaganda-inconsistent	0.484 (0.018)***
Approval+Media usage: Supporters+non-like-minded*False*Propaganda-inconsistent	0.369 (0.024)***
Num.Obs.	243 387

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.

Table G10: Accuracy given age

	2020	2019	2020	2019	2020	OMI
(Intercept)	0.388***	0.479***	0.388***	0.465***	0.475***	0.520***
	(0.007)	(0.006)	(0.008)	(0.006)	(0.016)	(0.024)
Age: 25-34	−0.013**	−0.001	−0.004	0.018***	0.009	0.011
	(0.004)	(0.003)	(0.006)	(0.004)	(0.011)	(0.019)
Age: 35-44	−0.016***	−0.007*	−0.010+	0.014***	0.016	0.018
	(0.004)	(0.003)	(0.006)	(0.004)	(0.010)	(0.019)
Age: 45-54	−0.014**	−0.012***	−0.011+	0.005	0.018+	0.001
	(0.005)	(0.003)	(0.006)	(0.004)	(0.011)	(0.021)
Age: 55-64	−0.010*	−0.018***	−0.017**	−0.010*	0.023*	0.021
	(0.005)	(0.003)	(0.006)	(0.004)	(0.011)	(0.021)
Age: 65+	−0.009+	−0.027***	−0.035***	−0.030***	0.022+	0.011
	(0.005)	(0.004)	(0.007)	(0.005)	(0.012)	(0.031)
Media: Only/mostly critical	0.051***	0.075***	0.051***	0.075***	0.109***	0.125***
	(0.003)	(0.002)	(0.003)	(0.002)	(0.007)	(0.035)
Media: Only/mostly state-run	−0.008**	−0.031***	−0.008**	−0.031***	−0.007	−0.005
	(0.003)	(0.002)	(0.003)	(0.002)	(0.007)	(0.015)
Media: State and critical	0.026***	0.027***	0.026***	0.027***	0.070***	0.046*
	(0.003)	(0.002)	(0.003)	(0.002)	(0.007)	(0.020)
Media: State TV	−0.022***	−0.041***	−0.022***	−0.041***	−0.042***	−0.047**
	(0.003)	(0.002)	(0.003)	(0.002)	(0.007)	(0.016)
Education	0.007**	0.012***	0.008***	0.012***	0.035***	0.053***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.005)	(0.011)
Female	−0.035***	−0.020***	−0.035***	−0.020***	−0.068***	−0.060***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.011)
False	0.144***	−0.039***	0.145***	0.005		
	(0.002)	(0.002)	(0.008)	(0.005)		
Propaganda-consistent	−0.001	0.062***	−0.001	0.062***		
	(0.002)	(0.002)	(0.002)	(0.002)		
Propaganda-inconsistent	−0.077***	0.031***	−0.077***	0.031***		
	(0.002)	(0.002)	(0.002)	(0.002)		
Quiz 2	0.092***	0.074***	0.092***	0.074***		
	(0.003)	(0.003)	(0.003)	(0.003)		
Age: 25-34*False			−0.022*	−0.058***		
			(0.009)	(0.006)		
Age: 35-44*False			−0.016+	−0.063***		
			(0.009)	(0.006)		
Age: 45-54*False			−0.008	−0.054***		
			(0.009)	(0.006)		
Age: 55-64*False			0.018+	−0.023***		
			(0.009)	(0.006)		
Age: 65+*False			0.067***	0.009		
			(0.011)	(0.009)		
Num.Obs.	295 523	572 899	295 523	572 899	52 278	8418
Stories	All	All	All	All	OMI stories	OMI stories

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

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. In Column 5, the analysis is limited to 4 stories included in the OMI survey. The OMI model controls for assigned news sources and story fixed effects.

Table G11: Accuracy given education

	2020	2019	2020	2019	2020	OMI
(Intercept)	0.388***	0.479***	0.386***	0.475***	0.475***	0.520***
	(0.007)	(0.006)	(0.007)	(0.006)	(0.016)	(0.024)
Education	0.007**	0.012***	0.011**	0.017***	0.035***	0.053***
	(0.002)	(0.002)	(0.003)	(0.002)	(0.005)	(0.011)
Media: Only/mostly critical	0.051***	0.075***	0.051***	0.075***	0.109***	0.125***
	(0.003)	(0.002)	(0.003)	(0.002)	(0.007)	(0.035)
Media: Only/mostly state-run	−0.008**	−0.031***	−0.008**	−0.031***	−0.007	−0.005
	(0.003)	(0.002)	(0.003)	(0.002)	(0.007)	(0.015)
Media: State and critical	0.026***	0.027***	0.026***	0.027***	0.070***	0.046*
	(0.003)	(0.002)	(0.003)	(0.002)	(0.007)	(0.020)
Media: State TV	−0.022***	−0.041***	−0.021***	−0.041***	−0.042***	−0.047**
	(0.003)	(0.002)	(0.003)	(0.002)	(0.007)	(0.016)
Age: 25-34	−0.013**	−0.001	−0.013**	−0.001	0.009	0.011
	(0.004)	(0.003)	(0.004)	(0.003)	(0.011)	(0.019)
Age: 35-44	−0.016***	−0.007*	−0.016***	−0.007*	0.016	0.018
	(0.004)	(0.003)	(0.004)	(0.003)	(0.010)	(0.019)
Age: 45-54	−0.014**	−0.012***	−0.014**	−0.012***	0.018+	0.001
	(0.005)	(0.003)	(0.005)	(0.003)	(0.011)	(0.021)
Age: 55-64	−0.010*	−0.018***	−0.010*	−0.018***	0.023*	0.021
	(0.005)	(0.003)	(0.005)	(0.003)	(0.011)	(0.021)
Age: 65+	−0.009+	−0.027***	−0.009+	−0.027***	0.022+	0.011
	(0.005)	(0.004)	(0.005)	(0.004)	(0.012)	(0.031)
Female	−0.035***	−0.020***	−0.035***	−0.020***	−0.068***	−0.060***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.011)
False	0.144***	−0.039***	0.152***	−0.027***		
	(0.002)	(0.002)	(0.005)	(0.004)		
Propaganda-consistent	−0.001	0.062***	−0.001	0.062***		
	(0.002)	(0.002)	(0.002)	(0.002)		
Propaganda-inconsistent	−0.077***	0.031***	−0.077***	0.031***		
	(0.002)	(0.002)	(0.002)	(0.002)		
Quiz 2	0.092***	0.074***	0.092***	0.074***		
	(0.003)	(0.003)	(0.003)	(0.003)		
Education*False			−0.009	−0.014***		
			(0.006)	(0.004)		
Num.Obs.	295 523	572 899	295 523	572 899	52 278	8418
Stories	All	All	All	All	OMI stories	OMI stories

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

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. In Column 5, the analysis is limited to 4 stories included in the OMI survey. The OMI model controls for assigned news sources and story fixed effects.

Table G12: Accuracy given media usage, controlling for assigned news sources

	2020	2020	2020	2020	2019	2019
(Intercept)	0.388***	0.490***	0.481***	0.466***	0.479***	0.471***
	(0.007)	(0.007)	(0.008)	(0.018)	(0.006)	(0.006)
Media: Only/mostly critical	0.051***	0.034***	0.034***	0.027***	0.075***	0.075***
	(0.003)	(0.003)	(0.003)	(0.008)	(0.002)	(0.002)
Media: Only/mostly state-run	−0.008**	0.001	0.001	0.003	−0.031***	−0.031***
	(0.003)	(0.003)	(0.003)	(0.007)	(0.002)	(0.002)
Media: State and critical	0.026***	0.025***	0.024***	0.019*	0.027***	0.027***
	(0.003)	(0.003)	(0.003)	(0.008)	(0.002)	(0.002)
Media: State TV	−0.022***	−0.012***	−0.012***	−0.010	−0.041***	−0.041***
	(0.003)	(0.003)	(0.003)	(0.008)	(0.002)	(0.002)
Age: 25-34	−0.013**	0.001	0.001	0.002	−0.001	−0.001
	(0.004)	(0.005)	(0.005)	(0.012)	(0.003)	(0.003)
Age: 35-44	−0.016***	0.006	0.006	−0.002	−0.007*	−0.007*
	(0.004)	(0.005)	(0.005)	(0.012)	(0.003)	(0.003)
Age: 45-54	−0.014**	0.007	0.007	0.002	−0.012***	−0.012***
	(0.005)	(0.005)	(0.005)	(0.012)	(0.003)	(0.003)
Age: 55-64	−0.010*	0.007	0.007	0.004	−0.018***	−0.018***
	(0.005)	(0.005)	(0.005)	(0.012)	(0.003)	(0.003)
Age: 65+	−0.009+	0.004	0.004	−0.004	−0.027***	−0.027***
	(0.005)	(0.006)	(0.006)	(0.014)	(0.004)	(0.004)
Education	0.007**	0.007**	0.007**	0.007	0.012***	0.012***
	(0.002)	(0.003)	(0.003)	(0.007)	(0.002)	(0.002)
Female	−0.035***	−0.028***	−0.028***	−0.030***	−0.020***	−0.020***
	(0.002)	(0.002)	(0.002)	(0.005)	(0.002)	(0.002)
False	0.144***	0.176***	0.176***	0.182***	−0.039***	−0.039***
	(0.002)	(0.002)	(0.002)	(0.006)	(0.002)	(0.002)
Propaganda-consistent	−0.001	−0.020***	−0.020***	−0.017**	0.062***	0.062***
	(0.002)	(0.002)	(0.002)	(0.006)	(0.002)	(0.002)
Propaganda-inconsistent	−0.077***	−0.070***	−0.070***	−0.057***	0.031***	0.031***
	(0.002)	(0.002)	(0.002)	(0.006)	(0.002)	(0.002)
Quiz 2	0.092***	0.049***	0.050***	0.063***	0.074***	0.074***
	(0.003)	(0.003)	(0.003)	(0.007)	(0.003)	(0.003)
Num.Obs.	295 523	244 570	244 570	37 397	572 899	572 899
Assigned source	No	No	Yes	No	No	Yes
Stories	All	Except 3	Except 3	Except 3	All	All

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

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. Columns 1 and 5 are the models presented in the main text (without controlling for assigned news sources). Column 2 repeats Column 1, dropping three stories where sources were not not assigned randomly. Column 3 repeats Column 2, controlling for news sources. Column 4 repeats Column 2, keeping only respondents who saw stories without any sources. Column 6 repeats Column 5 controlling for news sources.

Table G13: Accuracy given presidential approval, controlling for assigned news sources

	1	2	3
(Intercept)	0.432***	0.502***	0.492***
	(0.011)	(0.012)	(0.012)
Approval	−0.002	−0.010*	−0.010*
	(0.004)	(0.004)	(0.004)
False	0.035***	0.085***	0.085***
	(0.005)	(0.006)	(0.006)
Propaganda-consistent	−0.063***	−0.063***	−0.063***
	(0.004)	(0.004)	(0.004)
Propaganda-inconsistent	−0.058***	−0.023***	−0.023***
	(0.004)	(0.004)	(0.004)
Media: Only/mostly critical	0.046***	0.033***	0.032***
	(0.003)	(0.004)	(0.004)
Media: Only/mostly state-run	0.000	0.007*	0.007*
	(0.003)	(0.003)	(0.003)
Media: State and critical	0.028***	0.028***	0.027***
	(0.003)	(0.003)	(0.003)
Media: State TV	−0.011***	−0.003	−0.003
	(0.003)	(0.004)	(0.004)
Age: 25-34	−0.011*	0.003	0.003
	(0.005)	(0.005)	(0.005)
Age: 35-44	−0.013**	0.009+	0.009+
	(0.005)	(0.005)	(0.005)
Age: 45-54	−0.015**	0.005	0.005
	(0.005)	(0.005)	(0.005)
Age: 55-64	−0.005	0.010+	0.010+
	(0.005)	(0.005)	(0.005)
Age: 65+	−0.005	0.007	0.007
	(0.005)	(0.006)	(0.006)
Education	0.009***	0.008**	0.008**
	(0.003)	(0.003)	(0.003)
Female	−0.036***	−0.029***	−0.029***
	(0.002)	(0.002)	(0.002)
Quiz 2	0.095***	0.055***	0.055***
	(0.003)	(0.003)	(0.003)
Approval*False	0.048***	0.074***	0.074***
	(0.008)	(0.009)	(0.009)
Approval*Propaganda-consistent	0.098***	0.098***	0.098***
	(0.006)	(0.006)	(0.006)
Approval*Propaganda-inconsistent	−0.167***	−0.166***	−0.166***
	(0.006)	(0.007)	(0.007)
False*Propaganda-consistent	0.197***	0.161***	0.161***
	(0.006)	(0.007)	(0.007)
False*Propaganda-inconsistent	0.092***	0.008	0.008
	(0.008)	(0.009)	(0.009)
Approval*False*Propaganda-consistent	−0.257***	−0.248***	−0.248***
	(0.010)	(0.011)	(0.011)
Approval*False*Propaganda-inconsistent	0.284***	0.257***	0.257***
	(0.012)	(0.013)	(0.013)
Num.Obs.	243 387	201 386	201 386
Assigned source	No	No	Yes
Stories	All	Except 3	Except 3

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

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. Column 1 is the model presented in the main text (without controlling for assigned news sources). Column 2 repeats Column 1, dropping three stories where sources were not assigned randomly. Column 3 repeats Column 2, controlling for news sources.

Table G14: Accuracy given presidential approval and media usage, controlling for assigned news sources

	1	2	3
(Intercept)	0.449 (0.012)***	0.515 (0.012)***	0.505 (0.012)***
Approval+Media usage: Critics+like-minded	0.003 (0.007)	0.007 (0.007)	0.007 (0.007)
Approval+Media usage: Critics+non-like-minded	0.007 (0.006)	0.008 (0.006)	0.009 (0.006)
Approval+Media usage: Supporters+non-like-minded	0.007 (0.008)	0.008 (0.008)	0.008 (0.008)
Approval+Media usage: Supporters+like-minded	−0.024 (0.006)***	−0.024 (0.006)***	−0.024 (0.006)***
False	0.041 (0.009)***	0.109 (0.010)***	0.109 (0.010)***
Propaganda-consistent	−0.062 (0.007)***	−0.061 (0.007)***	−0.061 (0.007)***
Propaganda-inconsistent	−0.155 (0.007)***	−0.117 (0.008)***	−0.117 (0.008)***
Age: 25-34	−0.013 (0.005)**	0.001 (0.005)	0.001 (0.005)
Age: 35-44	−0.016 (0.005)***	0.006 (0.005)	0.006 (0.005)
Age: 45-54	−0.019 (0.005)***	0.002 (0.005)	0.002 (0.005)
Age: 55-64	−0.009 (0.005)+	0.007 (0.005)	0.007 (0.005)
Age: 65+	−0.009 (0.005)+	0.004 (0.006)	0.004 (0.006)
Education	0.010 (0.003)***	0.009 (0.003)**	0.009 (0.003)**
Female	−0.038 (0.002)***	−0.030 (0.002)***	−0.031 (0.002)***
Quiz 2	0.095 (0.003)***	0.055 (0.003)***	0.055 (0.003)***
Approval+Media usage: Critics+like-minded*False	0.000 (0.012)	−0.027 (0.015)+	−0.027 (0.015)+
Approval+Media usage: Critics+non-like-minded*False	−0.011 (0.011)	−0.024 (0.013)+	−0.025 (0.013)+
Approval+Media usage: Supporters+non-like-minded*False	0.003 (0.015)	−0.003 (0.018)	−0.003 (0.018)
Approval+Media usage: Supporters+like-minded*False	0.070 (0.011)***	0.082 (0.013)***	0.082 (0.013)***
Approval+Media usage: Critics+like-minded*Propaganda-consistent	−0.022 (0.010)*	−0.022 (0.010)*	−0.023 (0.010)*
Approval+Media usage: Critics+non-like-minded*Propaganda-consistent	0.021 (0.009)*	0.021 (0.009)*	0.021 (0.009)*
Approval+Media usage: Supporters+non-like-minded*Propaganda-consistent	0.085 (0.013)***	0.086 (0.013)***	0.086 (0.013)***
Approval+Media usage: Supporters+like-minded*Propaganda-consistent	0.116 (0.009)***	0.116 (0.009)***	0.116 (0.009)***
Approval+Media usage: Critics+like-minded*Propaganda-inconsistent	0.198 (0.010)***	0.181 (0.011)***	0.181 (0.011)***
Approval+Media usage: Critics+non-like-minded*Propaganda-inconsistent	0.053 (0.009)***	0.056 (0.010)***	0.056 (0.010)***
Approval+Media usage: Supporters+non-like-minded*Propaganda-inconsistent	−0.015 (0.012)	−0.020 (0.013)	−0.020 (0.013)
Approval+Media usage: Supporters+like-minded*Propaganda-inconsistent	−0.086 (0.009)***	−0.086 (0.010)***	−0.086 (0.010)***
False*Propaganda-consistent	0.138 (0.011)***	0.091 (0.013)***	0.091 (0.013)***
False*Propaganda-inconsistent	0.247 (0.013)***	0.143 (0.014)***	0.143 (0.014)***
Approval+Media usage: Critics+like-minded*False*Propaganda-consistent	0.146 (0.016)***	0.146 (0.018)***	0.146 (0.018)***
Approval+Media usage: Critics+non-like-minded*False*Propaganda-consistent	0.007 (0.014)	0.024 (0.016)	0.025 (0.016)
Approval+Media usage: Supporters+non-like-minded*False*Propaganda-consistent	−0.122 (0.020)***	−0.093 (0.023)***	−0.093 (0.023)***
Approval+Media usage: Supporters+like-minded*False*Propaganda-consistent	−0.255 (0.015)***	−0.231 (0.017)***	−0.230 (0.017)***
Approval+Media usage: Critics+like-minded*False*Propaganda-inconsistent	−0.330 (0.020)***	−0.287 (0.021)***	−0.287 (0.021)***
Approval+Media usage: Critics+non-like-minded*False*Propaganda-inconsistent	−0.074 (0.017)***	−0.065 (0.019)***	−0.065 (0.019)***
Approval+Media usage: Supporters+non-like-minded*False*Propaganda-inconsistent	0.039 (0.023)+	0.050 (0.025)*	0.050 (0.025)*
Approval+Media usage: Supporters+like-minded*False*Propaganda-inconsistent	0.154 (0.017)***	0.142 (0.019)***	0.142 (0.019)***
Num.Obs.	243 387	201 386	201 386
Assigned source	No	No	Yes
Stories	All	Except 3	Except 3

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. Column 1 is the model presented in the main text (without controlling for assigned news sources). Column 2 repeats Column 1, dropping three stories where sources were not assigned randomly. Column 3 repeats Column 2, controlling for news sources.

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