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**STRUGGLING FOR THE NARRATIVE:
COMMUNICATION STRATEGIES OF THE
GOVERNMENT AND THE OPPOSITION IN THE
NON-DEMOCRATIC CONTEXT (THE CASE OF RUSSIA)**

Candidato: Aidar Zinnatullin

Coordinatore Dottorato:
Prof. Roberto Rizza

Supervisore: Augusto Valeriani

Co-supervisore: Stefano Bianchini

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Abstract

This study examines how key actors within authoritarian regimes (government and opposition) use different political communication strategies to achieve their strategic goals: maintaining and changing the political status quo, respectively. I study the Russian case as a prime example of an informational or electoral autocracy. My dissertation explores how the government communicates with its loyal citizens and the vertical power structure, including regional and local subordinates. The research also investigates the opposition's strategies to polarize society and examines public responses to these endeavors. The study highlights how Russian central authorities utilize online citizens' feedback mechanisms to signal to regional elites that their internal political processes and performance are being monitored. I show that the effectiveness of regional elites in building political machines is associated with the Kremlin's semi-official interactions with the regional elites. Focusing on the opposition, the research specifically analyzes the YouTube community formed around Alexei Navalny. I provide empirical evidence on the relatively short-term affective attunement induced by a leader promising social changes within an authoritarian context. I show how the incivility of messages plays a role in further involving commenters in discussions. Users avoid extreme incivility when interacting with other commenters, but uncivil comments are more likely to start discussion threads. Pro-government sentiments are associated with a subsequent response from Navalny's supporters to the out-group criticism and contribute to the further formation of hubs with a pro-government narrative. From a broader perspective, the dissertation sheds light on the nature of authoritarian control, which involves not just coercion but also persuasion and gaining the loyalty of citizens. It also reveals that opposition communities on social media in Russia's non-democratic context do not entirely isolate their members from opposing viewpoints. Instead, exposure to contrary ideas unifies the group and strengthens their collective identity.

Keywords: autocracy, authoritarian responsiveness, affective polarization, social media, cross-cutting disagreement

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Introduction

The *research question* that spans the dissertation is how key political actors within autocratic political regimes—the government and the opposition—use online political communication to achieve their strategic goals: to keep the political status quo and to challenge the dominance of the existing power structures, respectively. Given the global trend towards autocratization of political regimes (Alizada, Boese, Lundstedt, Morrison, Natsika, Sato, & Lindberg, 2022; Repucci & Slipowitz, 2022), I present the study based on the example of Russia in the period from 2013 to 2022, when the regime in the country could be characterized as an informational (Guriev & Treisman, 2019) or electoral (Gel'man, 2012; Schedler, 2013) autocracy.

I focus on strategies of political communication deployed by key actors within authoritarian regimes - the government and non-systemic opposition (Schedler, 2013). In the former case, I mainly refer to authoritarian responsiveness, i.e. government's strategy of working with the loyal population (Wintrobe, 2000; Lueders, 2022; Dimitrov, 2023); in the latter, the emphasis is on the instruments of mobilization of dissenters.

The Russian political regime before the full-scale invasion of Ukraine had been characterized as one of the most skillful and successful examples of informational autocracies, i.e., the type of regime with limited competitiveness in politics where the legitimacy of the government was based on creating and maintaining the image of an effective ruler (Guriev & Treisman, 2022). It is important to emphasize in this regard that this image is deliberately de-politicized, and political communication plays an essential role in creating this image. The idea is to show that the authorities are effective in solving the “real” problems of citizens (roads, transport, housing, communal services, financial assistance, etc.) without talking too much about “imaginary” values, such as freedom of speech and the ability to criticize the government for limiting political participation. In line with this logic, in 2019–2020, the Russian authorities introduced a special system of communication between the regional and local levels of government and citizens, which was embodied in a

special structure similar to a project office: Regional Governance Centers deployed throughout the country. Therefore, I study the engagement with this communication system and how it is used to solve an autocrat's dilemma, i.e., making lower levels of government accountable while providing some degree of freedom to express citizens' discontent. To do this, I study the content of Telegram channels associated with different levels of government in Russia (federal center and regional/local levels of governance). The decision to focus on the Telegram platform is due to the fact that this platform has become very important for political communication, especially on the elite level, in Russia against the backdrop of the Kremlin's total control of television and the main domestic social media platforms. From the temporal perspective, the issue of authoritarian responsiveness is considered, taking into account the beginning of a full-scale Russian invasion of Ukraine.

For political communication that happens on the opposition side, the YouTube community formed around Alexei Navalny was chosen for the empirical analysis. Navalny became the leader of the non-systemic opposition in Russia between 2013 and 2021, managing to organize an effective machine for mobilizing supporters for participation in protest collective actions—one of the most serious risks for authoritarian regimes. I argue that Navalny's role in Russian politics during the period under study made his main informational resource, his YouTube channel, a suitable venue to explore the phenomenon of affective polarization in a non-democratic context. In these contextual circumstances, polarization leads to much stronger consequences for politics and society in general due to its encompassing nature formed on the “power-opposition” dimension (Urman, 2019). Moreover, the features of polarization within a non-democratic context can also have serious implications for the period that follows the regime change (Nugent, 2020 a).

I rely on the minimalist approach of Svoboda (2012) to the study of authoritarian regimes that boils down to two main fault lines: (1) the interaction of the ruling elite and the ruled and (2) relations within the ruling elite. This theoretical framework drives my asymmetric research design for studying autocracy in Russia. Thus, in the case of government strategy, I focus on the

role of political communication with (1) the loyal population and (2) with elements of the vertical power (regional and local levels of governance). Regarding the opposition, I study attempts to polarize society and the audience's reaction to these attempts. From the opposition's perspective, attempts to polarize the communication space can be considered as a logical response to the depoliticization of Russian society, which was systematically instilled by the authorities throughout Putin's rule right up to the start of a full-scale invasion of Ukraine in 2022. In this regard, the empirical part of the work can be considered as an analysis of opposing strategies to create an image of "responsive authorities" from the Kremlin's side and the polarization of the communication space by Alexei Navalny as the leader of the Russian opposition during the period under study. At the same time, the phenomenon of polarization from the authorities' perspective is also reflected, but without relying on the analysis of empirical data, because researchers are actively investigating this topic (Lankina & Watanabe, 2017; Stukal, Sanovich, Bonneau & Tucker, 2017; Sanovich, Stukal & Tucker, 2018; Stukal, Sanovich, Tucker & Bonneau, 2019; Stukal, Akhremenko & Petrov, 2022; Sobolev, 2021; Alyukov, 2021; Greene, 2022; Greene & Robertson, 2022). In contrast, the phenomenon of authoritarian responsiveness, both from (1) the perspective of direct interaction with citizens and (2) the regime's resilience along the "center-regions" axis, has not been studied so thoroughly.

The main results of the dissertation can be summarized in several takeaways. The first group of conclusions is devoted to the government's strategy to deal with communication challenges, specifically in terms of strengthening the loyalty of citizens. The central authorities not only rely on complaints from citizens to estimate how the lower levels of governance perform but also actively send signals hinting that even internal processes within regions are monitored by the presidential administration. Those regional elites who failed to establish effective political machines which have to provide necessary results in elections (through mobilization of certain groups of the electorate, intimidation of independent observers, and manipulation of the election results) are primarily attacked by the central government. When it

comes to presenting success stories to the public by the central government, attention is paid to the regions that have the resources to solve citizens' problems effectively and faster. Regional Governance Centres in the territories, which are the core element of the communication system between citizens and authorities, encounter ambivalence when they have to follow the requirements established by the presidential administration and the interests of regional elites because they actively interact with them. When it comes to the user engagement side, i.e., what is interesting to the audience of regional Telegram channels, users are more actively sharing information about social payments, some useful information about the opportunities for citizens provided by the authorities, and options to directly communicate with them.

The second group of conclusions relates to the discussions that happen in the community of Russia's opposition leader Alexei Navalny and thus covers aspects of political communication regarding the opposition. Videos attracting newcomers to Navalny's YouTube channel are most concerned with resonant anti-corruption investigations against high-ranking Russian officials and the failed attempt to poison Navalny by security forces. The prevalent topics in discussions are related to praising Navalny's activity, criticism of the government, and the inducement of spreading videos to change the minds of apolitical citizens or pro-government supporters. Then, the cohort of commenters who first engaged with Alexei Navalny's YouTube content during a period of high public interest in the politician's activities was less likely to stay in the community. Those who started to comment when there was no high public interest in Navalny, in the long run, linger more in the community of Russia's most vocal opposition politician. The period of a high level of interest in Navalny was associated with more active involvement in the discussions of those who were not previously registered on YouTube. One-off commenters (i.e., those who write a comment only once and do not contribute to the discussion) appear more often during periods of high interest in Navalny, while prolific commenters join predominantly when public interest in the Russian opposition leader is below average. Although one-off commenters outnumbered those who commented more frequently, the latter contributed

eight times more to the production of comments. Sixth, the level of incivility in Navalny's community was higher than that of an apolitical celebrity YouTube channel. Uncivil comments are more likely to generate discussion threads than civil ones. But this relationship is not straightforward in terms of the correlation "more incivility, more discussion." It rather tells us that to be discussed, a comment must have some potential for deliberation in terms of signaling that the environment is conducive to the expression of opinions in a more frank manner. In addition, the toxicity of comments gets higher over time after a video is posted. This was observed during the first 14 hours after the release of the video. Next, the level of toxicity for top-level maternal comments and messages left in threads stabilizes, remaining approximately at the same level. My analysis also concluded that discussions in Navalny's YouTube comment section are not a manifestation of a bastion of like-minded users who have no opportunity to meet cross-cutting disagreements. Instead, critics of Navalny are visible, and their presence attracts both oppositional sentiments as a response and endorsements from like-minded, pro-government, commenters.

Implications of the dissertation lie in several dimensions as well. From the substantial perspective, the dissertation presents a broader view of the nature of authoritarian control. Often, this involves not only coercion but also inducing and convincing a loyal population (Wintrobe, 2000), although this loyalty can have many shades and is not always complimentary to the government (Scott, 1990; Dornschneider, 2023). Further, the findings highlight the role of incivility in the specific context of Russia, where the authorities restrict people's expressions about politics in general and regulate the way they have to communicate on the Web (for instance, swear words are prohibited by law) (Bodrunova, Litvinenko, Blekanov & Nepiyushchikh, 2021). To be discussed, a comment must have some potential to signal that the environment is free to express opinions in a frank manner, without slipping into the direct abuse of the participants. Next, oppositional communities on social media in the non-democratic context of Russia do not fully create ideological silos where their members cannot encounter the opposite point of view. Rather, they may see ideas that are contrary to their views. In such a situation, this only

contributes to the rallying of the group and the strengthening of a common identity.

Next, from a methodological perspective, the dissertation highlights the importance of underestimating attempts to study affective polarization and the government's political communication strategies within a non-democratic context using observational digital data. For obvious reasons, such as the sensitivity with which citizens present their true political preferences to researchers when it comes to traditional methodological tools, most notably surveys, digital trace data have the potential to address these methodological challenges, at least for some of the aspects related to social and political processes within a non-democratic context (Lanabi La Lova, 2023).

The manuscript proceeds as follows. In the first chapter, I start with conceptual clarifications regarding the political regime established in Russia in 2013–2021. I specify the theoretical framework of the study, taking into consideration the actors' perspective and the role of the media in contemporary authoritarian politics. Then, a brief introduction to the evolution and state of the media system in Russia is presented. In the second chapter, I present an analysis of the government's strategy of online communication designed to demonstrate its effectiveness to the citizens. The third chapter is devoted to the online communication carried out by the opposition in Russia. I present the results of a comprehensive analysis of the discussions that happen in the online community of the most vocal Russian opposition politician, Alexei Navalny. The conclusions section summarizes the main findings and discusses implications of the study.

In the following text, I use the words “government”, “presidential administration”, “Kremlin”, “central authorities”, “ruling regime”, “ruling elite”, “ruling class”, “Moscow” (in the context of center-regions relations) interchangeably to denote the regime of the personalist autocracy of Vladimir Putin in Russia.

Chapter 1. The role of political communication in autocracies

With the start of Russia's full-scale military invasion of Ukraine in February 2022, the Russian authorities limited the operation of foreign social media platforms in Russia to ease the management of the communication field in delivering information beneficial to the regime. Access to Twitter was already limited on February 26th¹. Meta Corporation, which owns Facebook, Instagram, and WhatsApp, was recognized as an extremist organization by the Russian court, and its activities in Russia were banned on March 14². Access to Facebook and Instagram was limited, but the blocking did not affect WhatsApp Messenger³. The latter is apparently because the platform has the largest audience among other similar services for instant text messaging in Russia⁴.

Many observers predicted an imminent ban on the most popular video platform in the country, YouTube. High-ranking officials spoke about the need to limit the operation of the platform, for example, the official representative of the Russian Ministry of Foreign Affairs, Maria Zakharova⁵, the Deputy Chairman of the Security Council, former President Dmitry Medvedev, and many others⁶. Each time YouTube blocks channels and videos of Kremlin-affiliated structures and bloggers, calls from public speakers to ban the platform's activities in Russia intensify. But the ban itself never happens.

¹ Elizabeth Culliford. Twitter says its site is being restricted in Russia, <https://www.reuters.com/technology/twitter-says-its-site-is-being-restricted-russia-2022-02-26/>, accessed 27 January 2024.

² Russia bans Facebook and Instagram under 'extremism' law, <https://www.theguardian.com/world/2022/mar/21/russia-bans-facebook-and-instagram-under-extremism-law>, accessed 27 January 2024.

³ Russia finds Meta guilty of 'extremist activity' but WhatsApp can stay, <https://www.reuters.com/technology/meta-asks-russian-court-dismiss-proceedings-extremism-case-reports-2022-03-21/>, accessed 27 January 2024.

⁴ Telegram overtakes WhatsApp in terms of traffic for the first time (Telegram впервые обогнал WhatsApp по объему трафика), <https://www.vedomosti.ru/technology/articles/2023/01/23/959995-telegram-obognal-whatsapp>, in Russian, accessed 27 January 2024.

⁵ Anna Kaplan, YouTube Blocks Russian Parliament Channel Duma TV, Leading Russian Officials To Warn Of Retaliation, <https://www.forbes.com/sites/annakaplan/2022/04/09/youtube-blocks-russian-parliament-channel-duma-tv-leading-russian-officials-to-warn-of-retaliation/?sh=28327baf21a3>, accessed 27 January 2024.

⁶ Moscow wants Google to stop spreading 'threats' against Russians, <https://www.aljazeera.com/news/2022/3/18/russia-google-must-stop-spreading-threats-against-russians>, accessed 27 January 2024.

Russian political pundits argue⁷ that due to the popularity of YouTube among the population (a monthly audience of 90 million people⁸), such a ban could irritate the population, which is feared by the Russian presidential administration, which is responsible for managing political processes in the country. In addition, many bloggers find fertile ground on the platform, promote a narrative that is beneficial for the Kremlin, and oppose opponents of the regime, who are also actively developing their content production and distribution systems.

This short story illustrates how, even in the conditions of excessive tightening of control over the communication space after the invasion of Ukraine, the Russian presidential administration is trying to be flexible in organizing its communication with citizens and its opponents. Therefore, the communication strategies of the Russian regime cover different scenarios and target audiences, each of which requires a special approach. This dissertation is devoted to the communication strategies of the government and the opposition to establish control over the political narrative. Still, before delving into the description of these strategies, it makes sense to provide a terminological explanation of the political regime established in Russia in the period before the start of the full-scale invasion of Ukraine (2013–2021) and the state of the media industry in the country as the most crucial channel for political communication.

1.1 Terminological clarification about non-democratic regimes

Despite the long-standing institutionalization of political science, there are still terminological gaps when the research community has not developed a unified position on what to mean by a particular phenomenon. Moreover, due

⁷ Когда в России отключат YouTube? И почему Кремль воюет теперь и с коммунистами, и с либералами? [When will YouTube be turned off in Russia? And why is the Kremlin now fighting both communists and liberals?] <https://meduza.io/episodes/2021/10/02/kogda-v-rossii-otklyuchat-youtube-i-pochemu-kreml-vo-yuet-teper-i-s-kommunistami-i-s-liberalami>, in Russian, accessed 27 January 2024.

⁸ Mediascope: YouTube продолжает лидировать по охвату среди видеосервисов в РФ [Mediascope: YouTube continues to lead in reach among video services in the Russian Federation] <https://telesputnik.ru/materials/trends/news/mediascope-youtube-prodolzhaet-lidirovat-po-okhvatu-sredi-videoservisov-v-rf>, in Russian, accessed 27 January 2024.

to the specific focus of researchers on the processes taking place within a limited number of economically developed countries in the global West (Wilson & Knutsen, 2022; Hendrix & Vreede, 2019; Németh, 2022) there is an imbalance in the efforts to comprehend some political phenomena with an event-driven switch to other regions (Pelke & Friesen, 2019). One notable example here is the concept of autocracy, which is mostly understood as a deviation from the democratic normative standard. But is this a correct interpretation?

First of all, a non-democratic rule has a variety of manifestations that cannot be captured by conventional democratic metrics (Wright, 2021). And the question is how to make the relevant classification. This is especially true when it comes to borderline cases. For example, a formerly democratic regime that respected the rights of minorities is becoming more exclusive, but formally competitive power-shaping mechanisms continue to operate. Let us give another example when the ruling party suddenly loses the elections, but the system is designed in such a way that it continues to give preferences to the previously dominant player, which now formally belongs to the opposition. Bogaards describes this situation using the example of Orban's regime in Hungary, where “the long-term appointments to key positions and the policies enshrined in the constitution and cardinal laws” (Bogaards, 2018, p. 1489) would create benefits for the Fidesz party even if the party lost elections. As a result, minimalistic definitions of democracy, such as “a system in which the party loses elections,” (Przeworski, 1991, p. 10) fail to distinguish between democracies and non-democracies. We have to go back to “adjectives.”

Within this discussion of nondemocratic regimes, a key question arises: should we even use democracy as a reference point, or is it something different with different parameters to analyze? In my opinion, Svobik shows quite convincingly that in the analysis of non-democratic regimes, one can get by with a minimalistic procedural approach to two dimensions that shape power relations in non-democratic regimes: (1) *the relationship between those who govern and those under control*, and (2) *the relationships within the ruling class itself* (Svobik, 2012). Svobik argues that the definition of autocracies by

searching for elements that are present in democratic regimes is wrong in a way that makes it difficult to understand the nature of non-democracies. Classifications of non-democratic regimes with ideal types and their descriptive characteristics are not very useful because such ideal types cannot fully capture the diversity of dimensions of autocratic politics. As a result, researchers have to deal with categories that are neither mutually exclusive nor collectively exhaustive.

Returning to the procedural dimensions proposed by Svobik (2012), his approach makes us think about the logic of authoritarian power in ways that are different from democracy. First, the autocratic structure of power suffers from a lack of independent authority, which would be responsible for compliance with the agreements between the main political actors, that is, the autocrat himself, his allies, and agents responsible for the use of violence. Second, violence is the ultimate arbiter in conflicts. These features shape the development of authoritarian politics, its institutions, and political courses. According to Svobik, the problems of control and power-sharing against the backdrop of the absence of an ultimate arbiter, who stays above the fray, and the widespread use of violence to resolve emerging conflicts constitute the variety of nondemocratic regimes depicted in the literature. Sometimes a personalist dictatorship arises, as, for example, in Iraq during the rule of Saddam Hussein. Somewhere, it is possible to institutionalize power relations for some time, as was the case in China before the accession of Xi Jinping. In other cases, the military takes power into its own hands, as it did in Myanmar in 2021.

This theoretical framework suggested by Svobik helps better understand what Bogaards depicts as differences between defective democracies (e.g., illiberal democracy, delegative democracy, exclusive democracy, etc.) and defective autocracies (e.g., electoral autocracy, power-sharing autocracy, and so on) (Bogaards, 2023). If flaws in democratic regimes lead to the concentration of power resources among a small group of actors (ideally one) and the undermining of inclusive political and economic institutions, flaws in autocracies do not make the system democratic. However, defects in democracies should be corrected as soon as possible due to their undesirability.

In autocracies, in turn, the defects of such a regime are desirable since citizens can benefit from their presence.

But the picture is much more complicated than the game-theoretical assumptions that dominate political science when it comes to describing the logic of the development of authoritarian regimes. Przeworski rightly notes in this regard that formalized models often use ideological clichés, such as “propaganda”, and “repression”, and do not always give a clear idea of how the mechanism of power is reproduced in such regimes (Przeworski, 2022). Therefore, cooptation and coercion are not the only strategies that the rulers in a less competitive settings exploit to preserve the status quo. Owen emphasizes the importance of considering public policy as well (Owen, 2023), because even non-democratic regimes rely on good governance practices that involve citizens in policy processes to solve local issues (Owen & Bindman, 2019; Owen, 2020). In this regard, one should not lose sight of the fact that democratic freedoms are not perceived by everyone as a value of the highest order. For example, Matovski shows how support for an autocrat is not something out of the ordinary when society wants stability and avoids political upheavals, seeing the coming to power of the opposition as another round of social and economic experiments (Matovski, 2018).

In addition, political competition may occur at different levels of the administrative hierarchy, especially in the case of federalistic states. In this regard, the regional aspect of the political regime should not be overlooked. Some regions may show more room for political competition, while others may not. In this regard, it is not entirely clear how correct it is to extrapolate observations made at the national level to certain regions.

As can be seen, in discussions about different types of nondemocratic regimes, I prefer to follow Svoboda's approach. His minimalistic view is not a simplification but rather an attempt to grasp the essential characteristics of an authoritarian type of governance. In autocracies, the stakes are much higher than in democracies, where institutions prevent a “zero-sum game.” In this sense, attempts to classify the undemocratic practices of government stumble

upon a variety of formalities rather than revealing fundamental differences between different regimes.

As noted above, Svoblik highlights two dimensions that shape power relations in non-democratic regimes. In this work, I mainly consider Svoblik's first dimension of autocracy (the relationship between those who hold power and those under control) but with an attempt to look closer at the principal-agent relations between central and regional authorities in Russia. In particular, I focus on the political communication of autocratic regimes, given that this aspect becomes more important for sustaining the status quo (Roberts, 2018; Guriev & Treisman, 2022). Political communication becomes a tool both for curbing those who are ruled over in Svoblik's terminology and for solving the problem of power-sharing without using violence up to a certain point. Moreover, informational autocrats can also turn into violence due to information activity and organizational capacities of the opposition to mobilize people and split the elite. Therefore, I also focus on how communication had been used by the opposition before the massive demolition of Navalny's political infrastructure after his return to Russia in 2021 and the almost total suppression of dissent that ensued after the full-scale Russian invasion of Ukraine.

1.2 The changing nature of the autocratic rule

Contemporary autocrats not only come to power through electoral procedures, but also use elections as a source of legitimacy. Scholars have defined such political regimes as electoral authoritarianism (Schedler, 2013). “The uneven playing field serves as a defining distinction between electoral authoritarianism and electoral democracy,” as Gel'man points out (Gel'man, 2012). This manifests in (1) unfair and fraudulent elections based on extremely high barriers to taking part in independent politicians; (2) the state apparatus working on the victory of the incumbent; (3) inequality in financial resources in favor of the incumbent; (4) the lack of access to media or other restrictions for opposition candidates; and (5) violations of voting procedures that are justified by courts subordinated to executive power.

Electoral autocracy differs from hegemonic or classic authoritarianism. The legitimacy of electoral autocrats is based not on ideology but on personalistic traits, their image as competent rulers, and restricted by the logic of political business cycles and rent-seeking (Gel'man, 2019). Thus, they are less likely to transfer power through dynastic inheritance (Brownlee, 2007). Autocrats and their ruling class in this institutional context resemble “roving bandits” who thieve a territory and legalize capital abroad (Olson, 1993)⁹. As such, electoral autocracies deal with a short-term planning horizon that leads to a “politicization of the state” when autocrats form political machines responsible for political mobilization of certain segments of citizens (pensioners, rural population), primarily those who work in companies close to the state (public enterprises, municipal services, school staff, public hospitals, etc.) (Golosov, 2013). For instance, companies that demonstrate vulnerability to pressure from the state, “such as with immobile assets and those that are owned by or sell their output to the state, are more likely to mobilize votes for the regime” (Frye, Reuter & Szakonyi, 2014).

The planning horizon dictates which projects need to be prioritized in policy - only those areas that can bring relatively quick and easily tangible results and can be presented to the public as a success story and a confirmation of the competence of the autocrat, even if these achievements may impede long-term strategic goals (Gel'man, 2019). Although this predatory interpretation of the government's policy in many areas can be justified by the scale of corruption that is regularly revealed by independent journalists and opposition politicians, it does not exclude the seriousness of the Kremlin “about working towards technological advancement, export diversification and sustainable long-term growth” (Matveev & Zhuravlev, 2023). According to the authors, such attempts failed due to the lack of political will necessary for the

⁹ “... when an autocrat has no reason to consider the future output of the society at all, his incentives are those of a roving bandit and that is what he becomes... whenever a dictator has a sufficiently short time horizon, it is in his interest to confiscate the property of his subjects, to abrogate any contracts he has signed in borrowing money from them, and generally to ignore the long-run economic consequences of his choices”.

implementation of a consistent strategy, and the absence of coordination between key actors responsible for achieving strategic goals.

Schedler highlights two interconnected and reinforcing challenges to autocrats' rule - institutional and informational uncertainties, and pays attention to the first one, particularly electoral mechanisms (Schedler, 2013). By institutional uncertainty, he mainly implies risks to leadership: rivals' threats (most authoritarian regimes are not able to cope with the succession problem (Brownlee, 2007), potential rebellion because of intolerance to criticism, and lack of security after the loss of power. Informational uncertainty means that autocrats systematically suffer from a lack of information due to the repression of expressing citizens' beliefs, the necessity to observe hidden actions of autocrats' agents, and the unreliability of information coming from lower levels of governance. Therefore, here, we see the necessity of autocrats to make things and processes more legible (in terms of James Scott (1998)) but not for the general public.

One solution is to guarantee freedom to independent media. Independent media helps autocrats control bureaucracy and reduce the costs of principal-agent relations to implement policy more effectively (Egorov, Guriev, & Sonin, 2009). However, this conclusion is valid only for countries without oil revenue. In oil-rich countries, autocratic leaders do not accept freedom of speech because available resources allow them to buy loyalty from the population and bureaucracy.

Reliance on fraudulent electoral procedures, not ideology, dictates autocrats the necessity to show themselves as competent leaders (Guriev & Treisman, 2019) whose projects had been declared before previous elections were successfully realized. As mentioned, their planning horizon is limited by being in power and not by long-term planning for future generations. Each electoral cycle (accompanied by electoral fraud) stresses the regime's ability to guarantee the necessary results and not to be captured in post-electoral protests that challenge the regime's survival (Tucker, 2007). Electoral fraud may serve as an important event that provokes protests, although not all manipulations lead to collective action (Frye & Borisova, 2017).

All this requires autocrats to work carefully in the communication field. Contemporary non-democratic regimes pay much attention to their public perceptions but differ in their degree of information control. Dictators in the past relied upon mass indoctrination and total intolerance of alternative thoughts, followed by mass repression. This system worked until the realities of the second part of the twentieth century, when many autocrats were forced to ease their grasp of narrow-minded information control. The brightest example of this process can be observed in the case of the 1980s China, where after the Cultural Revolution, the government allowed more freedom in the media and private life. After the events in Tiananmen Square, authorities reconsidered their media strategy making it less obtrusive, at the same time playing a pivot role in the prioritization of information for the general public (Roberts, 2018).

Nowadays, media management is crucial for autocrats because they can no longer use mass repression and political killings without repercussions (Guriev & Treisman, 2019). This change in authoritarian practices has its roots in social, economic, and technological changes in recent decades, such as the spread of education, improvement in the economic situation, open borders, appearance of new technologies, free movement of capital, and other factors¹⁰ that are beyond the scope of my research.

According to the informational theory of autocracy or *spin dictatorship*, autocrats survive because of their ability to persuade the public that they have the necessary competence to implement effective policies (Guriev & Treisman, 2015; Guriev & Treisman, 2019; Guriev & Treisman, 2022), even if the results of those policies are in fact bad (Gel'man, 2019). According to the results of the analysis of speeches to the general public by political leaders of three types of political regimes—democracies, overt dictatorships, and informational autocracies—informational autocrats' rhetoric is similar to that of democratic leaders, focusing on topics such as the economic situation and service provision. Bad governance leads to the need to work with public opinion. The role of propaganda, understood broadly as government advertising, promotion of distorted news, flooding the Web with government-paid trolls, “patriotic”

¹⁰ The authors call it a modernization cocktail. See: Guriev & Treisman (2022), P. 169-192.

education, *etc.*, is to create a plausible image of a competent leader (Guriev & Treisman, 2015). Autocrats also prefer to use the co-optation of informed elite members who know the current state of affairs and censor independent media assets in order to avoid the distribution of information about the leader's incompetence. In general, the basis of the informational autocracy model is the difference in political knowledge between the political elite, which has relevant information, and ordinary citizens.

In this work, I use electoral and informational authoritarianism as synonyms because both of them are theoretical concepts derived from the same empirical cases (including Russia) but emphasize different aspects: electoral procedures and information control, respectively. And both of them are widely used for the description of Putin's rule from 2000 to 2022.

1.3 Media system in Russia: Contextual clarification

Before highlighting the specifics of political communication in Russia under Putin's rule, I cannot ignore how this area developed in the period following the collapse of the Soviet Union. After all, the 1990s largely determine the current state of Russian politics and society.

What role did the media play in Russia after the regime transition caused by the collapse of communist rule lasting several decades? That political transition led to the break of the entire habitual way of life established over the past decades after Stalin's death in 1953. As was shown in the context of democratizing countries in Central and Eastern Europe (the Czech Republic, Hungary, Poland, Slovakia, Romania, and Bulgaria), “political transition creates an unstable political, social, and economic environment that places heavy informational demands on citizens who have several sources (parties, political organizations, social groups, mass media, and personal networks) from which to make sense of the new realities they face...” (Loveless, 2008, p. 175-176). Citizens start to rely on mass media to minimize uncertainty. “Equally important is the evidence that these information-seeking strategies are more pronounced in countries that are further away from democratic consolidation. Simply, mass media become less relevant to political

information gathering as both political and economic systems stabilize” (Loveless, 2008, p. 175-176). Despite the fact that Russia did not fall into the focus of Loveless's study, his conclusions can be reflected in the Russian case as well.

The 1990s in Russia, with the relative democratization of political life and the implementation of the “shock” scenario of transition to a market economy, were also marked by freedom of the media, which became an important factor in Russia's political life (De Smaele, 1999, p. 177-178). Military actions in the North Caucasus, multiple government crises, a severe deterioration of the social and economic situation, terrorist attacks in different Russian cities, the decentralization of center-regional relations, and other important events all contributed to the search for information by citizens.

At that time, Russia's major media outlets were owned by tycoons who could make their fortunes during the rapid transformation of the Russian economy. This fact led to the situation where the media landscape presented a motley picture of opinions, on the one hand, and contributed to the promotion of the interests of the owners, on the other. But there are several important nuances here. First, it is more accurate to say that the majority of Russian citizens predominantly had the opportunity to watch only state-owned channels (Enikolopov, Petrova, & Zhuravskaya, 2011) because of their free nature, unlike private TV assets and the unavailability of newspapers due to high prices (White, McAllister, & Oates, 2002, p. 21-22; White, Oates, & McAllister, 2005). Second, these state-owned free TV channels were also under control of oligarchs, such as Boris Berezovsky, who controlled the ORT (Public Russian Television) channel, which was later renamed Channel One. Amid the events in the development of which the state-owned media played an active role, I can mention the victory of Boris Yeltsin in the 1996 presidential elections (Belin, 2002, p. 143-144), the defeat of the “Fatherland-All Russia” bloc in the 1999 parliamentary elections (Hale, 2004), and the scandal over the Russian Prosecutor General Yuri Skuratov (Hale, 2004).

With the establishment of Putin's rule and the consolidation of his regime, there was an active trend towards establishing control over the media.

Putin's first two presidential terms were marked by the “economic and social stability” mantra (Hale, 2004; Simons, 2015; Matovski, 2018). Citizens, being tired of the economic and political shocks and tasting the delights of improving the quality of life due to high oil prices, became attracted by the image of a strong politician who was able to provide good economic performance. From this perspective, in the context of vulnerable democratic institutions and the erosion of support for the democratic process, the demotivation to participate in politics and to seek relevant political information is quite predictable. Putin's regime achieved economic stability and began to demonstrate its effectiveness, while the opposition voices became less vocal. For example, during this time period, television was consumed less for the purpose of gathering information and more for entertainment (Pietiläinen, 2008, p. 382) (which could be attributed to the general public's lack of desire to consume political information¹¹), and political TV shows and news releases were tightly controlled by the Kremlin. In other words, the authorities' desire to take control of the mainstream media coincided with the unwillingness of the people to invest their time in politics.

Before the full-scale Russian invasion of Ukraine in 2022, Putin's rule was considered one of the most evident cases of both electoral and informational autocracies. The administration of Russia's president managed to eliminate restrictions on his power by applying a relatively low degree of violence, using institutional imperfections (for instance, constitutional flaws in formulations about consecutive presidential terms), breaking electoral procedures, and active media expansion. Starting from the demolition of independent TV channels, NTV (HTB) and TV6 (TB6), which coincided with the killings of vocal journalists (Anna Politkovskaya and Paul Klebnikov), by the mid-2000s the administration of the Russian president could gain control over the main national TV and press outlets to promote its own agenda and

¹¹ For instance, Levada Center indicates lesser interest in political content on Russian TV in 2007 in comparison with 2000 http://www.levada.ru/sites/default/files/levada_2007_rus.pdf P. 163, accessed 27 January 2024.

suppress criticism. As can be seen in Figure 1, freedom of expression¹² and alternative sources of information in Russia have been under restrictions throughout the presidency of Vladimir Putin. As a baseline for comparison, I put numbers for Estonia, which manifests a success story in the democratization process of former Soviet Union republics, and for Ukraine - a country that had received so much attention in Russian official discourse before 2022).



Figure 1. Freedom of expression and alternative sources of information (Varieties of Democracy)

Specifically, in the Russian case, the government shows its strength through violence against the most vocal of the regime's opponents. Such messages are usually delivered through the prosecution of independent journalists, activists, scientists, and NGOs and through violence against them, which is then actively discussed on social media platforms and in independent media. The government's repression machine targets groups that see and can deliver the message that authorities are ineffective and not able to guarantee

¹² From V-Dem Codebook: To what extent does the government respect press and media freedom, the freedom of ordinary people to discuss political matters at home and in the public sphere, as well as the freedom of academic and cultural expression? See: Coppedge et al., 2020.

economic growth; therefore, autocrats aim to intimidate informed minorities about the repercussions of their actions against authorities. Before the full-scale Russian invasion of Ukraine, such cases were not widespread. Their goal was to silence opponents through the spread of self- and private censorship, in which private actors censor other private actors or individuals.

Beazer et al. shed light on an important aspect of information control in personalistic regimes such as Russia, where authorities lack strong institutional maintenance, foremost, a single-party system: how to induce non-state actors such as private firms not to go against the regime's priorities. According to the results of their study, private media firms in Russia that deal with online advertising censor advertisements that contain not only collective action appeals but also critical messages toward authorities (Beazer, Crabtree, Fariss, & Kern, 2022). “Russian private media firms censor other private actors even in the absence of direct government action” (Beazer et al., 2022., p. 23). And here we see that these results contradict what was found in the study of Chinese authoritarian censorship practices by King et al (2013). Criticism is likely to be less important for the hegemonic type of autocracy manifested in China because its leaders have an opportunity “to use a party as a buffer between them and the public” and to solve an “autocrat's dilemma” when it comes to gaining information about the corruption and disloyalty of its agents at lower levels of government. In personalistic autocracies like Russia, the issues of the system's effectiveness and the lack of malfunctioning are vital, and huge resources are allocated to PR campaigns and avoiding criticism.

It is necessary to question whether citizens are so easily manipulated and ready to consume everything that authorities within authoritarian settings suggest to them. The following aspect of the information control by autocrats helps answer this question: media market structure and media news reporting bias (Gehlbach & Sonin, 2014). Any autocratic government faces a problem: media bias caused by government control over media outlets results in less appealing content and lower audience attention. Moreover, as can be seen in Russia, new media platforms like YouTube pay their creators and attract

journalists and TV stars to migrate to the Internet, becoming independent from the state in their revenues. And excessive pro-government bias in the media, according to their arguments, is not in the interest of the regime because it decreases the exposure to propaganda—citizens will not consume such content and will not be exposed to it. From the market's perspective, media bias is associated with a reduction in advertising revenues due to the lack of interest among the audience. This situation also compels the government to pay higher costs to subsidize media outlets, whether they are state-owned or private. A government may disregard these constraints and pay for the bias if it is necessary to mobilize citizens for some political goal, even if such goals are contrary to citizens' interests. After the annexation of Crimea in 2014 and the subsequent severe deterioration of the relations between Russia and the West, the regime started to use the “rally around the flag” agenda with a strong incentive to mobilize citizens in their support of the current state of affairs. Unsurprisingly, at that time, a new round of the government's attempts to restrict media freedom began (for instance, with the new restrictive media ownership law in 2014¹³), while state-owned mainstream media companies had gotten more money from the federal budget¹⁴.

The phenomenon of self-censorship also played a role in how the Russian media system developed. As Zeveleva notes on the example of Crimean journalists after 2014, immediately after the annexation of Crimea to Russia, the state, through its agents (primarily the security services), outlined lines that journalists should not cross when covering events. By 2017, professionals in the media industry began to practice self-censorship, which acted as an adaptation strategy for retaining and gaining access to resources (Zeveleva, 2020).

With the development of the Internet and its active spread around the world, authoritarian regimes are faced with the need to respond to a new tool

¹³ Russia tightens limit on foreign ownership of media <https://www.theguardian.com/world/2014/sep/26/russia-limit-foreign-ownership-media>, accessed 27 January 2024.

¹⁴ Бюджет поможет "Первому" и ВГТРК <https://www.kommersant.ru/doc/2757814>, accessed 27 January 2024.

that is able to mobilize dissenters and coordinate their actions. The literature on the reaction of autocracies to the emergence of new technology focuses on several directions (Roberts, 2020). First, the extant literature concentrates on assessing the effect of censorship on further media consumption by citizens. There is no clear conclusion about the success of such a measure. According to some studies, services that are censored by governments continue to be popular or even receive additional resonance from those who previously did not pay any attention to them (Hobbs & Roberts, 2018; Nabi, 2014). According to other studies, autocracies find their way through as interest in blocked resources falls (Lutscher, 2023; Pan & Roberts, 2020). At the same time, the actions of the government can be either *coarse*, when it is explicitly declared that a particular resource is subject to blocking, or *covert*. In the latter case, it is not clear to a user what is the reason for the lack of a website's functioning: technical problems of the website owners or targeted actions to slow down traffic on the part of the authorities (Roberts, 2018).

The second strand of the literature on the censorship practiced by autocracies focuses on the more subtle ways to oppose dissent on the Internet. Here, I mainly refer to the studies focusing on the astroturfing efforts that actors affiliated with the government implement. Researchers have identified such attempts to shape public opinion both in autocracies and in democratic regimes (e.g., South Korea (Keller, Schoch, Stier, & Yang, 2019), Poland, Brazil, Israel, etc. (Bradshaw & Howard, 2017)). The aim of such activities is to create the visibility of approval of the government's actions or the existing order by ordinary Internet users, or, on the contrary, through trolling opponents, to create a sense of the absurdity of any discussions when it comes to politics.

In recent years, the Internet has been the most important channel for the dissemination of political information in Russia, successfully competing with television that promotes the Kremlin's agenda. 87 million citizens have access to the World Wide Web. The Internet is perceived by the Russian government as a mobilization mechanism against the regime by its opponents, and thus as a potential threat, because it provides an independent perspective on what is

going on in the country. Below, I present data on the Internet censorship efforts that the Russian government makes (Figure 2). Here, I again put numbers for Estonia and Ukraine¹⁵. From this graph, we see that Russia has demonstrated a steady decline in Internet freedom since 2004. The situation in Ukraine is more volatile. However, in recent years, we have observed the same trend in the contraction of internet freedom. Estonia confirms its reputation as one of the real success stories of democratization in post-Soviet territories.

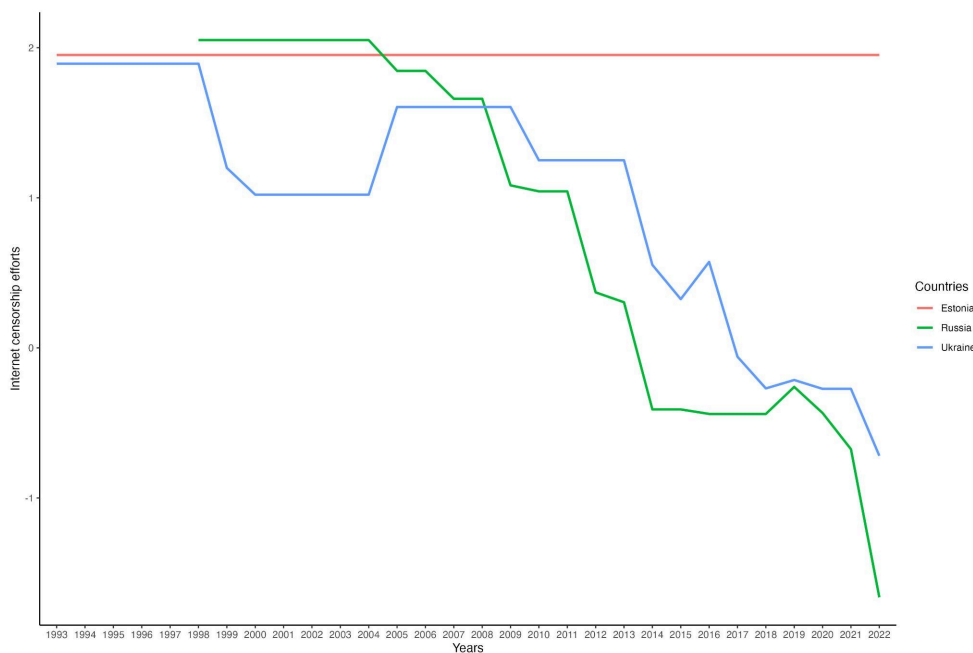


Figure 2. Internet censorship efforts in three post-USSR countries
(Varieties of Democracy project data)

Russian policy on the Internet aimed at preventing political mobilization of dissent (Sanovich, Stukal, & Tucker, 2018). The government responds to the opposition's online actions in three ways: (1) offline responses, which mean the ability of authorities to enforce restrictive laws and change the digital market through regulation, pressure, and purchasing power; (2) online restrictions, such as DDoS attacks on popular oppositional websites and blocking certain materials or entire web resources; and (3) the government's efforts to promote its agenda online by creating automated or human-generated

¹⁵ The source of the data is the Varieties of Democracy project (V-Dem) <https://www.v-dem.net/en/data/data-version-10/>, accessed 27 January 2024.

content. As an illustration of the latter activity, I can mention the classification of accounts that promote government discourse on Twitter. Five types of accounts that help authorities promote their agenda were detected: automated bots, cyborgs (something between bots and human accounts), humans (so-called “trolls” who post their own tweets and individuals who just retweet other accounts' content), spammers (who promote any item or service that is not about politics), and official government accounts¹⁶.

An important phenomenon of Russia's political life was the Telegram messenger, founded by brothers Pavel and Nikolai Durov after the Russian authorities forced them to sell to oligarchs close to the Kremlin their stake in the VKontakte company, which owned the social media platform of the same name - the Russian analog of Facebook. Telegram was launched in 2013 and gradually increased its audience worldwide as a source of political communication in contentious politics. For example, Iranian authorities actively blocked the platform due to its use by participants in anti-government protests (BBC News, 2018).

Unlike WhatsApp, Telegram, along with one-to-one chat, offered the functionality of channels with their one-to-many communication, where administrators of such channels could publish posts, and subscribers could only read and repost these messages to their contact peers on Telegram. Subsequently, users were also able to comment on messages if administrators activated this option.

Russian media outlets began to use Telegram's one-to-many functionality almost immediately, launching their representative public channels on the platform. However, this same function became a fertile ground for launching various anonymous channels when its authors concealed their identities, making it possible to speak quite freely on political topics. This gave rise to the phenomenon of anonymous Telegram channels, which offered the audience political analysis along with a variety of political rumors (Murtazin et

¹⁶ The research team also worked on detection of political orientation of the bots (pro-Kremlin, pro-Ukrainian, and pro-opposition). It is interesting that the amount of pro-Ukrainian and pro-opposition bots is almost the same as pro-Kremlin.

al., 2020) and even insider information about stock markets (Pankratova & Dvornikov, 2021). Anonymization provided an opportunity not only for regime critics to articulate their ideas openly but also for various pro-government groups (Rubin, 2018; Herasimenka, 2022; Kuznetsova, 2023).

By 2022, when Putin launched a full-scale invasion of Ukraine, introduced repressive legislation, and began to persecute opponents of the existing regime even more harshly, Telegram remained, along with YouTube, the only platform in which it is possible to consume opposition content relatively openly and without consequences. At the same time, its production, at least when the authors and administrators are physically located on the country's territory, can result in rapid de-anonymization and repression by the regime (Reiter & Pankratova, 2023).

Despite the ousting of opposition forces from the country, which previously relied on mobilizing the dissatisfied and organizing protest collective actions (primarily Alexei Navalny's team), contradictions within the authoritarian regime have not gone away. I mean here, firstly, elite groups associated with the vertical of power, business elites, and security forces. At the same time, Telegram retained its role as a means of political communication between these elite actors, who receive benefits due to its functionality related to serving the regime but are also forced to fight to preserve it due to the encroachments of other elite actors. The role of Telegram in such elite communication will be discussed in the next chapter using the example of the relations between the Center (Kremlin) and the regions in Russia.

In general, the model of interaction with the media, which was practiced by the Kremlin with the coming to power of Vladimir Putin before the start of the war with Ukraine, assumed the unobtrusive promotion of an agenda beneficial to the regime. Comprehensive censorship was not practiced; if necessary, opposition editorial teams were pressured mainly through economic leverage, coercion of media company owners, and subsequent co-optation into the ranks of media outlets, promoting a more restrained line towards the ruling regime. This was possible due to a curatorship system in

which officials from the administration of the Russian president arranged meetings with editors and publishers, including those who present independent media, to deliver the Kremlin's news agenda and explain the desired interpretation (Greene, 2022). Such a flexible system of contact with the “other side” allowed the Kremlin to reach audiences that were critical of the authorities. However, as I will show in the next chapter, this model of the Kremlin's interaction with the media gradually began to erode after the annexation of Crimea, when the confrontation between Russia and the West took tangible shape in the form of sanctions imposed on the Russian economy. Subsequently, the activities of Alexei Navalny to mobilize those who disagree with the authorities to participate in protests and then the full-scale invasion of Ukraine in 2022 further tightened the government's actions, increasing the level of polarization in society, expressed in the affective and existential confrontation “us-them”.

1.4 Studying political competition as a space for competition between the autocrat and the opposition

In this chapter, I have presented a theoretical framework to study the Russian political regime under the rule of Vladimir Putin before 2022, which is the primary case for the study of authoritarianism in this dissertation. The further analysis is based on a minimalist approach to the description of an authoritarian regime, which is not limited to defining authoritarianism through a simple negation of elements of democratic governance. The logic of authoritarianism differs from that of democracies because political struggle often comes down to a zero-sum game when conflict resolution is largely based on the use of violence rather than following well-established rules and procedures, as well as the presence of some kind of arbiter in the disputes that arise. As Svoboda (2012) points out, the focus on two following dimensions of the political process provides a compelling theoretical framework for the study of autocracies: (1) *the relationship between those who govern and those under control*, and (2) *the relationships within the ruling class itself* (Svoboda, 2012).

Within this approach, I pay close attention to political communication in Russia, which is used by two main actors within authoritarian regimes: the government and the opposition. In addition, I explore communication as a tool in the arsenal of the federal authorities (or colloquially, the Kremlin) to control and contain regional and local authorities.

In this regard, it also matters in which media environment the actors of the political process (government and opposition) operate. To do this, I briefly outlined the evolution of the Russian media system since the collapse of the Soviet Union. I show how the control of the media environment was an important component in strengthening the power of Vladimir Putin in the early years of his rule. At a time when mainstream media (including television as the primary source of political information for Russians) have lost their independence, the Internet is becoming a fertile medium for spreading an alternative political agenda. I discuss this in more detail in later chapters.

Thus, communication as a tool is becoming increasingly important for authoritarian rulers to maintain their dominant position. However, the opposition also uses this toolkit because, otherwise, it cannot by itself gather a significant number of potential participants for mass collective action. In the next chapter, I will focus on political communication carried out by the government. I will demonstrate how the authoritarian regime in Russia, on the one hand, polarizes the communication space through propaganda and repressions against independent media and, on the other hand, strategically works with the population, demonstrating itself as responsive and effective in solving the citizens' daily problems. I will also show how such authoritarian responsiveness, manifested in political communication, allows central authorities in Moscow to solve one of the dilemmas of authoritarian rule: holding the lower levels of governance accountable to Moscow while providing some degree of freedom in expressing citizen complaints. This is one of the first studies of the online communication system launched in 2020 by the Russian government for regional/local authorities-citizens interaction. In the second chapter, I also turn to the literature in the field of political science that focuses on principal-agency relations in authoritarian regimes and the

incentives that guide the central authorities in Russia in their interaction with the regions (primarily the creation of effective administrative political machines responsible for providing the necessary election results (Golosov & Konstantinova, 2016)). I am trying to connect these two storylines through a new dimension, i.e., political communication, which is carried out in Telegram - the most politicized media in Russia, along with YouTube.

In the second and third chapters, a significant place is also occupied by the comprehension of political polarization in Russia. I show how the authorities (Chapter 2) and the opposition (Chapter 3) instrumentally approach this phenomenon/process to achieve their strategic goals: maintaining and destroying the political status quo, respectively. I demonstrate how the Russian authorities can implement two communication strategies at once - to polarize public relations in confrontation with their direct opponents (non-systemic opposition aiming to change the regime) and to demonstrate themselves as responsive and effective in solving citizens' problems (precisely what is described and conceptualized in the literature on information autocracies (for instance, Guriev & Treisman, 2022)). Regarding the opposition, I pay attention to the opposition's strategy of exploiting the *affect* to politicize citizens. In this regard, I find the literature on affective attunement (Papacharissi, 2014; Papacharissi, 2015) and affective polarization (Törnberg, 2022) useful, specifically the role of incivility in affective polarization (Harel, Jameson & Maoz, 2020; Kosmidis & Theocharis, 2020).

I believe that Svoboda's (2012) minimalist definition of authoritarian rule, with its two dimensions (i.e., *how an autocrat interacts with (1) those who are governed and (2) other ruling class entities*) with a specific focus on political communication as a domain to compete between actors of authoritarian politics, provides fertile ground for the study of the mechanisms of authoritarian rule. I hope the following two empirical chapters will expand this understanding, at least a little.

Chapter 2. Government: divide and conquer for some and responsiveness for others

One of the key theses of the dissertation is the use of a diverse range of tools and strategies of political communication by the government in Russia to maintain the status quo. In this chapter, I consider two strategies of the authorities to save their dominance: the polarization of society and working with a loyal audience, which also allows them to control lower levels of government (regional and local). This section is about polarization strategies implemented by the authorities. I present a review of the extant literature on the government's use of media and propaganda to influence public opinion and maintain political control. I show how the government polarizes society by exploiting emotions like fear and positive sentiment. The role of media, particularly state-controlled TV, in shaping public opinion is highlighted, with a focus on the “rally around the flag” effect observed during events like the annexation of Crimea. I also discuss the shift from depoliticization strategies to more proactive efforts in identity formation and narrative control, particularly after the 2022 invasion of Ukraine. In the following sections of this chapter, I discuss how the government uses political communication to present themselves as effective and responsive to the complaints formulated by citizens and monitor the activities of lower levels of governance. All these areas align with the theoretical framework to examine how autocratic governments deal with those under control and the actors who constitute the governing elite (regional and local levels of governance) in a broader sense.

2.1 Polarization as a course of action from the government side

Polarization on the part of the government occurs through the use of two basic emotions: fear (for the opposition) and a mixture of positive emotions and fear (for the undecided and loyalists). The causal mechanism by which fear reduces the willingness of opposition-minded individuals to engage in protests against the government manifests itself through risk aversion and a more pessimistic assessment of the possible number of protesters (Young,

2019). Specifically in the Russian case, positive emotions play an important role in legitimizing autocratic power through the “rally around the flag” effect, and this second component had been manifested before 2022 in the media coverage of Russian policy toward Ukraine. The “rally around the flag” effect, which was manifested clearly in the annexation of Crimea to Russia in 2014, united people in an emotional outburst with each other. This unity happened through interaction with the media (primarily television) and politics in general (Greene & Robertson, 2022). Approval of the president's activities against the backdrop of this event occurred to a greater extent among consumers of news from federal TV channels controlled by the Kremlin who discussed the news with other people, thereby going through a common experience of politics. Moreover, this event had a fairly long-term positive effect on the perception of how and where the country is moving under its current leadership, despite the sanctions imposed by Western governments (Kizilova & Norris, 2023). Here, it is important to point out the differences in what kind of information circulates in competitive regimes and autocracies. If, in the former case, the media cover to a greater extent the inter-elite relations of the main parties in the electoral arena, then in the latter case, the discourse of dominating media outlets is built in line with the existential confrontation “*us vs. them*”. Citizens are offered identification with an authoritarian leader who opposes the intrigues of the “collective West,” which sees its goal as dismembering the country and turning it into vassals. The failures of the country's leadership, e.g., the increase in the cost of living, are explained in this case as the result of unfavorable circumstances, the responsibility for which lies with the “West” and its crooked leaders (Rozenas & Stukal, 2019).

Hale (2018) answers the question of which population groups were most affected by the effect of rallying around the flag in 2014, when Crimea was annexed by Russia. The result found by the author based on the survey experiment is reduced to a non-trivial conclusion. The greatest positive impact of the annexation of Crimea on the trust in Vladimir Putin was found among those who consumed the least information from state-controlled TV. This is

explained by the fact that the regular audience of state television has long been pumped up with the pro-Kremlin narrative. On the contrary, those who did not initially absorb the Kremlin discourse received an appropriate injection during the Crimean events of 2014. At the same time, those who were able to feel the cost of territorial expansion (through the worsening of the economic situation) for themselves or through acquaintances with whom they have personal contact were the least affected by the effect of rallying around an authoritarian flag.

The success of Putin's propaganda is not that it has the unique ability to convince people, as Shirikov (2022) shows. Its success is rooted in the fact that it exploits the beliefs that citizens already have and works to confirm them. Experiments show that sorting is also present under these conditions. Strong supporters of the regime are looking for confirmation of their own beliefs. When they are confronted with information that does not match their attitudes, such media coverage is perceived as unreliable (Shirikov, 2022).

Critical to the stability of autocratic rule, the ability of dissenters to unite and take collective action against the political status quo is also reflected in the media coverage of Ukrainian politics by the state-controlled outlets since the 2004 Orange Revolution. Generally, protest in the official Russian discourse is framed as disorder and war. For example, when commenting on the 2018 arrest of prominent Russian human rights activist Lev Ponomarev, president Putin referred to the French riots following a gas price hike. “Do you want to be like in Paris?”¹⁷ he asked, quickly became a meme on the Internet¹⁸. Users began to play around with this phrase, mainly hinting at the low standard of living in Russia in comparison with France. But the meaning laid down by Putin himself was the opposite. He obviously wanted to play on the Russians' fear of civil war. This explains the great attention paid by federal TV channels controlled by the Kremlin to events in pre-war Ukraine. They show that protest

¹⁷ 'We Don't Want Protests Like in Paris Here,' Putin Says, Explaining Jailing of Activist. <https://www.themoscowtimes.com/2018/12/12/we-dont-want-protests-like-in-paris-here-putin-says-explaining-jailing-activist-a63790>, accessed 27 January 2024.

¹⁸ «Вы что, хотите, как в Париже?» По России идёт новый мем о жизни во Франции, и ему пора в топ самых печальных [“Do you want to be like in Paris?” There is a new Russian meme about life in France, and it's time for it to be at the top of the saddest] <https://medialeaks.ru/1312xsh-hotite-kak-v-parizhe/>, accessed 27 January 2024.

leads to a clash of citizens with each other, during which aggressive radicals will surely become the winners, ready to kindle the fire of war against their own relatives. For instance, participants in focus groups are afraid that the Ukrainian events, framed by propaganda as disorder, war, and devastation (Lankina & Watanabe, 2017), could repeat in their own cities (Alyukov, 2021). It is important not to lose sight of the demand for stability that appeared in Russian society after the collapse of the Soviet Union and the subsequent social turmoil of the 1990s. Matovski convincingly shows that the dominant request of Russian public opinion in the post-Soviet period was the demand to ensure stability and prevent new political shocks that citizens associate with economic difficulties and rampant crime (Matovski, 2018).

One feature of Putin's regime, especially in the first period of his rule (2000–2008), was the deliberate depoliticization of the population, which was facilitated by economic growth after the deep socio-economic crisis of the 1990s. This depoliticization cannot, by definition, help unite ordinary people and the ruling elite (Ishchenko & Zhuravlev, 2022). People delegate important decisions to the ruling class, recognizing that they do not have the appropriate competencies to make politically relevant judgments. But the very fact of such a delegation does not speak of support for the policy implemented by the government or the regime's ability to indoctrinate ideologically. Rather, society is becoming even more atomized, seeing nothing in common between them and the way of life of the ruling class.

If in the previous periods of Putin's rule, the authorities tried to depoliticize people, then at the new stage, i.e., after the full-scale invasion of Ukraine in 2022, efforts are obviously directed in the opposite direction, even if this work is not done systematically. The Kremlin and political consultants who serve them associate social identity with the affective identification of an individual with a community. At the same time, they assume the government's active role in forming such an association. Indicative in this regard is the research article, whose authors were high-ranking officials of the presidential administration and researchers of one of the think tanks close to the Kremlin

(Harichev, Shutov, Polosin, & Sokolova, 2022). In this article, the authors argue that social identity, including cognitive schemes and behavioral strategies, is also based on the affective identification of a person with his/her community. At the same time, they note that identity is not formed once and for all, but requires “constant legitimation”. Even more interesting is the passage that argues that, on the one hand, harmony in society is achieved through tolerance for other opinions but through rejection of everything that splits society. Thus, the authors who are responsible for managing domestic political processes in the country (high-ranking officials of the presidential administration) make it clear that the government understands the need for proactive work on the formation of the identity of the regime's supporters, which ideally should be all citizens of the country. While this suggests limited tolerance for dissent, attempts to question the political status quo must be stopped.

One of the most frequent thinkers mentioned by Putin in his public speeches is Lev Gumilyov, as noted by political observers¹⁹. The key concept of his theory of “passionarity” involves the opposition “*us versus them*”, which is not necessarily based on common language, ideology, or origin. Passionarity means “fervor for the cardinal changes for the achievement of a certain group's projected goal” (Shnirelman & Panarin, 2001). At the same time, passionarity implies going beyond the limits of human ethics when needed. Undoubtedly, the works of this historian are not a handbook, serving as an orientation for the Russian authorities when making all their management decisions. Knowledge about Gumilyov is fragmentary, obtained through individual excerpts prepared for president Putin by his administration. However, this does not mean that certain ideas do not become important in determining the vision and assessment of the political situation by the ruling elite in Russia.

¹⁹ Кажется, Путин и правда думает, что может победить Запад. Почему? Возможно, потому что верит в теории Льва Гумилева. Сейчас все объясним, [It seems Putin really thinks he can beat the West. Why? Perhaps because he believes in the theories of Lev Gumilyov. Let's explain everything now] <https://meduza.io/feature/2022/11/14/kazhetsya-putin-i-pravda-dumaet-cto-mozhet-pobedit-za-pad-pochemu>, in Russian, accessed 27 January 2024.

As Greene notes, a comparison with the regime of Alexander Lukashenka in Belarus can show how pressure on the media system by the Russian authorities will further polarize society (Greene, 2022). The Russian media space was notable for having a so-called “gray zone” between a pro-government media fringe and the opposition to the Kremlin. This term refers to the media outlets that previously demonstrated a critical attitude towards the political reality of Russia but were then relatively mildly incorporated into the range of media resources controlled by the Kremlin. When the political situation was not so polarized, the audience of such media remained more or less loyal to the brand. Thus, the Kremlin had the opportunity to promote its agenda and reach a wide variety of audiences, including those expressing a critical attitude toward the political situation in the country.

But when the political reality is divided into “black and white,” the existence of such a “gray” zone becomes less possible. Green uses the example of Belarus to demonstrate how people begin to consume information only from media outlets that align with their political beliefs (Greene, 2022). There is polarization in society when people become immune to interpretations coming from the opposite camp. Moreover, an individual's environment begins to pull her/him in one direction or another. Staying somewhere in the middle becomes impossible—the “gray zone” disappears. As a result, the media landscape's polarization becomes an indicator of society's division into polarized camps—loyalty to the regime or opposition. It goes hand in hand with the government's repressive actions to suppress dissent both on the streets (brutal dispersal of rallies of dissenters, poisoning Navalny and imprisoning him, and the destruction of his protest infrastructure, etc.) and against those who are not afraid to speak publicly about things sensitive to the regime (the expansion of the foreign agent's law on media and individuals, etc.).

The empirical analysis in the context of affective polarization has been carried out only about the opposition as an actor and is presented in Chapter 3. Undoubtedly, polarization also occurs on the part of the government, but I am interested in the period of activity of Navalny's team inside Russia, whose aim

from the beginning was to increase the level of citizen politicization, including creating a network of activists throughout the country. The authorities, interested in the depoliticization of citizens during this period, were forced to react to this initiative from the opposition. At the same time, Russian authorities implement different strategies when it comes to the demand side from the citizens. There are situations and groups of citizens with whom they work through the strengthening of their initial loyalty. But concerning those who are overtly critical of the current state of affairs in the Russian political system and are ready to take part in collective actions aimed at changing the political regime, the authorities prefer to use repressive methods (Wintrobe, 2000). Since scholars have been studying strategies to counter the opposition online for quite some time (Stukal, Sanovich, Bonneau & Tucker, 2017; Sanovich, Stukal & Tucker, 2018; Stukal, Sanovich, Tucker & Bonneau, 2019; Stukal, Akhremenko & Petrov, 2022; Sobolev, 2021), I pay closer attention to the government's strategies targeting those who initially show some loyalty to the regime. Moreover, these efforts to work with loyal citizens go hand in hand with the efficiency of the lower levels of government of the formal federation that Russia still is. Ultimately, citizens are more likely to interact with the local and regional levels of government than with the federal level of governance. In this regard, it is essential for the Kremlin that the lower levels of government can maintain a more or less acceptable level of solving citizens' problems (or, at a minimum, conduct appropriate communication with citizens on these issues). Therefore, the communication strategy of the ruling regime will be considered further, taking into account the principal-agent relations between the federal center and regional authorities.

2.2 Autocratic regime resilience through responsiveness

One of the first tasks of Vladimir Putin, who took the presidency in 2000, was to limit the influence of regional elites. In the 1990s, when the federal center was in crisis due to the collapse of the Soviet Union, regional elites were able to pursue independent policies that may have little regard for the interests of the Kremlin. This was reflected in the seizure of economic

assets by regional elites, the emergence of many contradictions between federal and regional legislation, and open political confrontation with the Kremlin (Treisman, 2002). For example, influential regional governors (Moscow Mayor Yurii Luzhkov and Tatarstan president Mintimer Shaimiev) were at the origins of the “Fatherland-All Russia” party, which was a competitor to the “Unity” party project supported at that time by Prime Minister Vladimir Putin during the parliamentary elections 1999 (Smyth, 2002; Hale, 2004). Regional freedom was seriously limited during Putin's first two terms as president (Goode, 2007; Petrov, 2010), but regional diversity has not disappeared. In a country with 11 time zones, it is impossible to control all regions from one center effectively. Contradictions between the federal center and the regions will inevitably arise—this aspect I explore in this chapter on the Kremlin's political communication strategies. How do the Russian authorities make the lower levels of governance more accountable while providing some degree of freedom in the expression of citizens' grievances? The answer to this question is crucial for understanding the nature of autocratic rule, specifically authoritarian responsiveness. I will show how communication is an important tool for the government, both in tackling the principal-agent problem typical of multi-level authoritarianism, and in directly convincing citizens of its effectiveness, using the example of a system for processing online complaints from citizens. The empirical basis for the research in this chapter is the Telegram messenger, which has become an essential platform for political communication in Russia (Salikov, 2019).

Power relations within authoritarian regimes are not built solely on violence. Autocrats make great efforts to create the necessary loyalty to the authorities of different sides: mainly, bureaucratic apparatus and population. (Wintrobe, 2000; Matovski, 2018; Owen & Bindman, 2019; Owen, 2020; Lueders, 2022; Przeworski, 2022; Dimitrov, 2023). At the same time, authoritarian rule confronts the problem of the information deficit when central authorities want to get their agents (regional and local levels of government) to fulfill their directives. It is naive to think that the autocrat's instructions will be carried out entirely and flawlessly by his agents (Wintrobe, 2000). Those

agents (security apparatus, regional/local levels of governance, personalities responsible for the distribution of economic resources, etc.) may also have their own interests and career incentives and act strategically to realize them (Thomson, 2023). In such strategic action of the agents, the autocrat's interests and intentions can be relegated to the background if appropriate monitoring of the agents' activity is not carried out (Svolik, 2012). On the other hand, the autocratic regime has to actively monitor the attitudes of citizens either to prevent protests (Dimitrov, 2023) or channel them in a certain direction that would avoid questioning the competence of the autocrat (Gainous, Han, MacDonald, & Wagner, 2023). In this part of the chapter, I show how the Russian authorities use the system of citizens' appeals to solve these dilemmas: how to make the lower levels of governance more accountable while providing some degree of freedom in expressing citizens' grievances.

Relations between the central authorities and the regions are a classic manifestation of principal-agent relations. For Russia, with its geographical extent of 11 time zones, political management from a single center is not a trivial task, given the regime's willingness to centralize and unify political decision-making. The manifestation of this intention can be found in the launch of the communication mechanism between the authorities and citizens introduced in 2020 to quickly resolve emerging problems reported by citizens in the form of complaints on social media. The infrastructure for communication created under this initiative, coupled with the specifics of political communication in Russia, allows me to study principal-agent relations through the communication between central and regional authorities. Since I follow this logic of principal-agent relations, I postulate the following **research question**: *What factors are associated with the criticism from the central government targeting regional authorities?* I approach the question empirically by using the content of Telegram channels operated by the central and regional authorities and created as a constitutive part of the communication system of the Regional Governance Centers.

Telegram channels are essential to Russia's media system and play a noticeable role in the country's politics. Despite the Russian government's long

history of controlling mainstream media, independent journalists and political commentators have turned to platforms like Telegram to share uncensored news, opinions, and analysis because Telegram's encryption makes it more challenging (but still possible) for authorities to monitor or control its content. Telegram is not just a messaging app; it is a media platform with public channels where one can broadcast messages to unlimited subscribers. This makes it an effective tool for disseminating information swiftly. In Russia, this feature is actively exploited both by independent journalists and pro-government actors (propaganda outlets, federal and regional elites). Over time, an ecosystem of various channels dedicated to different niches, from politics to economy to daily news, has developed. Users can choose from a vast array of channels tailored to their interests. For some, Telegram channels have become a source of income through advertising, sponsorships, and donations. This provides an incentive for content creators to maintain active and high-quality channels. In summary, the combination of Telegram's features, its positioning as a free and uncensored platform, and the specific socio-political context of Russia has made it an essential medium for political discourse in the country.

The exploratory findings of text analysis of the Telegram posts indicate that by using Telegram as a tool, central authorities actively signal to the regional elites that internal processes within regions are monitored. Although the statistical significance of the expectation that regional elites, who failed to establish effective political machines, would primarily encounter attacks from central authorities was not demonstrated across the models at the conventional level, the direction of the association indicates that the success of political governance at the regional level can be an essential factor for the Kremlin in its semi-official communication with the regions. When it is necessary to highlight the best practices of local governance, the central government uses economically strong regions with the resources required to solve citizens' problems as a primary example. I also provide results for the preliminary analysis of the demand side of the activities carried out by the regional authorities, i.e., what is interesting to the audience of regional Telegram

channels. Descriptive text analysis results show that the messages containing information from which citizens can benefit are shared the most. It is primarily information about education, bureaucratic guidance, and, to a lesser degree, social assistance and how to communicate directly with officials.

2.2.1 Why be responsive?

The collection of information about the preferences and attitudes of citizens is essential for the stability of non-democratic regimes. It applies both to (1) the reaction of the authorities to the discontent formulated by certain groups of the population and manifested in collective action; and to (2) proactive monitoring of potential protest moods (King, Pan & Roberts, 2013; King, Pan & Roberts, 2014). In the first case, the costs for the regime are much higher. The reason is clear: mass protests have the potential to further spread dissatisfaction with the regime (McAdam, Tarrow & Tilly, 2001; Chenoweth & Stephan, 2011). Therefore, it is important for non-democratic regimes to collect pre-emptively information that is voluntarily provided by the citizens themselves. But it is possible only when (1) the level of citizens' fear of being punished because of their complaints and demands is low and (2) the authorities demonstrate a high level of responsiveness to incoming appeals (Dimitrov, 2023).

According to Dimitrov's observations, the communist regimes of the second half of the twentieth century managed to create an institutional mechanism (state security, party organizations, and the media outlets) through which they *ex ante* collected information about citizens' discontent (Dimitrov, 2023). This institutional mechanism was mostly based on a system of appeals from citizens. The regime under Vladimir Putin has largely continued the practice of using a system of complaints from citizens.

In this chapter, I focus on the online dimension of the system of appeals in Russia that was deployed massively in 2018–2020. Initially, this system of appeals was using official emails and the offices of representatives of the

Russian president in regions that attracted attention of those seeking to complain about injustices they encountered. But the Internet and social media platforms in particular are also places where citizens raise their voices to improve the quality of their lives by asking authorities to do a better job. In many cases, these claims do not interfere with the political domain. People want better public transportation, communal services, social assistance conditions, and other primarily non-political things (Bogdanova, 2021). Russian authorities understand the necessity of working with such groups and prepare a special offer that also helps to solve one of the autocrat's dilemmas: (1) making lower levels of government accountable to the principal (the Kremlin) through the spread of critical messages about their performance, and (2) in such a way, avoiding questioning an autocrat's (the Kremlin's) ability to solve problems by blaming local authorities for the problems citizens face.

The introduction of this communication system aligns with the global trend to adopt complaint systems called, in the literature, grievance redress mechanisms (Bhattacharjee & Mysoor, 2016; Hossain, Joshi & Pande, 2023). The feedback system between citizens and the authorities finds its manifestation in different institutional frameworks. At the same time, the leaders in this process are regimes that seek to limit the level of competition in politics through open procedural mechanisms (Hossain, Joshi & Pande, 2023). One of the most striking examples is China, where attempts to channel citizen dissatisfaction through online complaint forms have been made since the turn of 1990-2000 when Internet accessibility began to spread. This process of incorporating feedback from citizens took place through the initiative taken by local authorities, for whom it was important for career promotion to demonstrate success in public policy including the innovations that allow framing citizens' dissatisfaction in a positive way for the authorities (Göbel & Li, 2021). In Russia, the establishment of an online feedback system from the very beginning was top-down and centralized. But at the same time, there is a similarity with China. In both countries, the initiators of such complaint systems were inspired by the practices of online commercial enterprises (for example, online shopping platforms). The CEO of the Dialog organization, the

operator of the Russian communication system that is the focus of this study, directly expressed that they copied what corporations do in their communication with clients²⁰. In China, government agencies outsource their web presence to companies like Alibaba or Tencent (Göbel & Li, 2021).

Thus, Russian authorities understand the necessity of being reachable and providing communication with their citizens. In autocracies, relative freedom on the Internet can be considered a mechanism of *voice*—the concept offered by Hirschman (1970). While national borders are open, those who strongly disagree with current policy and have the opportunity to immigrate are able to use the *exit* option and, as a result, minimize their impact on the survival of the regime. The *voice* option is useful for those who are not ready and able to emigrate or who demonstrate some degree of loyalty (Scott, 1990; Wintrobe, 2000; Dornschneider, 2023) to the regime in the country. They can use available instruments to provide feedback on the government's actions, both offline and online.

2.2.2 Regional Governance Centers and Complaints from Citizens

In 2020, Russian president Putin decreed to introduce online platforms for communication between citizens and authorities in all regions that would ignore political appeals, as was noted in one of the expert discussions on this topic²¹. This communication system consists of four components (Figure 3). The first element of this system is an autonomous, non-commercial organization called Dialog. Autonomous, non-commercial organization is a legal status that allows the Russian presidential administration to get rid of the legal restrictions imposed on official organizations. It is a common practice in Russia, especially when the official organizations need to deal with huge funds from the state budget. To avoid the necessity of publicizing information on their activities and where they allocate these financial resources, they create organizations with such status and make them direct contractors. These direct

²⁰ "Nothing can remain absolutely free" (Абсолютно свободным ничего не может оставаться), <https://www.kommersant.ru/doc/4519974>, in Russian, accessed 27 January 2024.

²¹ Online session of the Volga Expert Club (Онлайн-заседание Экспертного штаба Волга), <https://youtu.be/gzplb3hNws8>, in Russian, accessed 27 January 2024.

contractors are not obliged to be open. The Dialog organization is the direct contractor of the Russian presidential administration. They are responsible for the deployment of the Regional Governance Centers across the country (their role will be described below); they organize training and workshops for employees on how to communicate and analyze data (demands and complaints).

The second element of this communication system is **the Incident Management** monitoring system. Officially as a pilot initiative, Incident Management was created and launched in 2018. Before the shutdown of foreign social media platforms after the full-scale Russian invasion of Ukraine, the system monitored five social media platforms: VKontakte (vk.com), Facebook, Instagram, Twitter, and Odnoklassniki (ok.ru). Now, it deals mostly with platforms that were originally Russian, plus Telegram²². The system reacts to particular keywords that users write in their open accounts or public groups, or when they tag official pages. Monitoring results are administered by the information and analytical departments of regional administrations, which decide what messages need to be responded to by the authorities. Then, these appeals are sorted by their functional profile and the level of governance—regional ministries or municipal services—depending on the scale of the problem. Regional ministries or municipal authorities must respond to the message on the same social media platform. The answer is automatically directed to the regional administrator of the Incident Management system. Statistics are administered for all “work in progress” and unprocessed situations, or *incidents*. The crucial thing in this situation is that the current state of affairs related to the performance of ministries and municipal services can be observed both by regional authorities and the administration of the Russian president²³.

²² "Nothing can remain absolutely free" (Абсолютно свободным ничего не может оставаться), <https://www.kommersant.ru/doc/4519974>, in Russian, accessed 27 January 2024.

²³ How the Kremlin will respond to complaints on social media (Как Кремль будет реагировать на жалобы) в соцсетях, <https://www.rbc.ru/politics/23/07/2018/5b50d1579a7947c62c195e8b>, in Russian, accessed 27 January 2024.

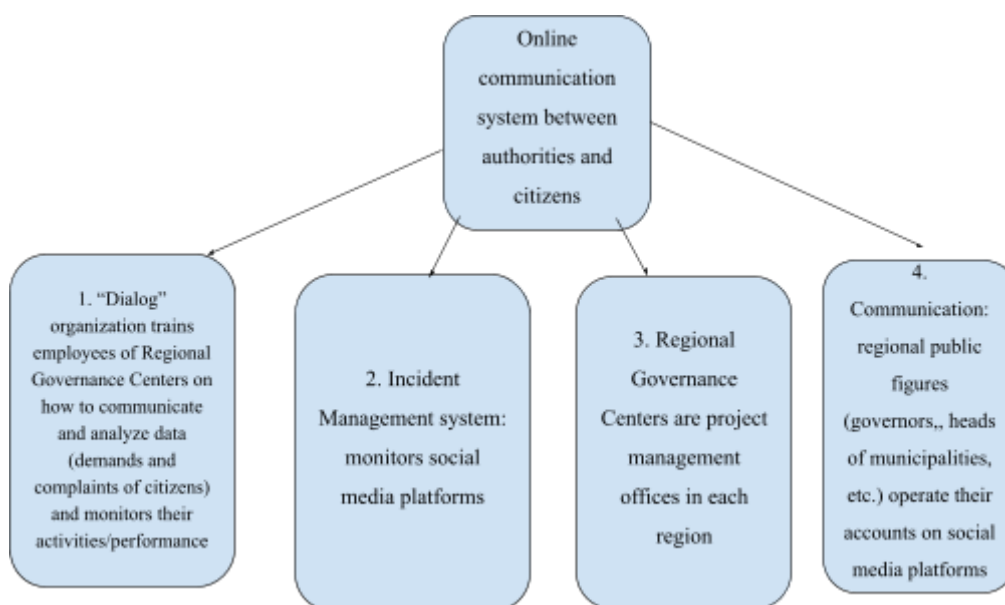


Figure 3. Components of the online communication system launched by the Russian authorities in 2020

Based on the Incident Management monitoring system, so-called **Regional Governance Center** (Центр управления регионом) were created, whose tasks include establishing interaction²⁴ between regional ministries and municipal services to quickly resolve emerging problems as well as analyzing citizens' complaints. This is the third element of the communication system between authorities and citizens. Regional Governance Centers should be considered as project management offices.

The final element of the communication system launched by the Russian authorities is communication itself. All public figures like regional governors, ministers, heads of municipalities, and official organizations have to create and actively operate their accounts on social media platforms. The idea is “to go to the people”²⁵ and speak with them on their terms to strengthen the trust of the public and convince them that authorities are competent (Guriev & Treisman, 2015).

²⁴ Nothing can remain absolutely free (Абсолютно свободным ничего не может оставаться), <https://www.kommersant.ru/doc/4519974>, in Russian, accessed 27 January 2024.

²⁵ Online session of the Volga Expert Club (Онлайн-заседание Экспертного штаба Волга), <https://youtu.be/gzplb3hNws8>, in Russian, accessed 27 January 2024.

In the launch of the Incident Management monitoring system as well as regional governance centers, we see how the Kremlin monitors situations in lower levels of governance (Anderson, Buntaine, Liu & Zhang, 2019; Göbel & Li, 2021; Hossain, Joshi & Pande, 2023). The reason for doing that is to avoid scandals that may undermine the loyalty of the population. In other words, a principal - the Kremlin - requires an instrument to prevent overt failures of its agents. However, periodically reputational scandals arise because of the malfunctioning of regional and municipal levels of governance. Let us consider the following case. In December 2020, when the Incident Management System, as well as regional governance centers, had already been deployed throughout the country, a scandal erupted in the Republic of Bashkortostan, which quickly spread beyond the region²⁶. The mayor of the 16,000-strong town of Agidel complained on his page on the social network VK.com that residents had not wanted to work at the new sewing factory. In his post, the mayor forgot to mention that wages at the enterprise had been offered in the amount of 15,000 rubles (200 euro), while the average salary in the region was 38,000 (more than 400 euro) rubles according to Rosstat, the main state bureau of official statistics. Users of VK.com quickly pointed this out to the mayor, suggesting that he leave his position and go to work for this amount. On the one hand, the mayor conscientiously follows the Kremlin's demands to be open to citizens and communicate with them on social media platforms. But in the end, this leads to such embarrassment when openness actualizes social problems that local authorities have no way to solve. As a result, the level of social tension is rising, which is what the Kremlin fears so much (Crowley, 2021).

2.2.3 Communication and principal-agents relations

I argue that the logic of the institutional struggle (between the principal, i.e., the Kremlin, and its agents which are the regional elites) is reflected in the political communication of the Dialog organization (a direct contractor of the

²⁶ "The mayor of the city in Bashkortostan was indignant at the unwillingness of people to work for 15 thousand rubles" (Мэр города в Башкортостане возмутился нежеланием людей работать за 15 тыс. рублей), https://www.gazeta.ru/social/news/2020/12/11/n_15346513.shtml, in Russian, accessed 27 January 2024.

presidential administration) with the regional governance centers. I illustrate this thesis by comparing the content of two Telegram channels associated with the Dialog organization - official one and non-official: ЦУР Official (<https://t.me/tsurofficial>) and ЦУР - Центр управления регионом (<https://t.me/thisistsur>).

In general, the phenomenon of anonymous telegram channels in Russia requires academic reflection. At the moment, their role in political communication is being revealed through investigative journalistic materials (Reiter, Pankratova, & Yapparova, 2023; Zholobova, Reiter, Pankratova, & Pertsev, 2023). Taking into consideration the Kremlin's control over the agenda in the mainstream media (television, print media, social media, and search engines) and the inability to eradicate conflictual relations within the ruling elite, which occur along a variety of dimensions (economic, center-regions, between different security agencies, and so on), platforms for publishing compromising materials in an anonymous format like Telegram are becoming an attractive opportunity. The word "kompromat", which appeared in Russia and migrated to many other languages (Choy, 2020), symbolizes the roots of this practice in the country's history (Oates, 2007). The current closedness of the political system, in turn, indicates that defamatory information about certain personalities/organizations continues to keep its relevance as a tool in conflicts between elite groups. Telegram, which uses anonymous channels to disseminate such information, has become an integral part of such communication at the elite level (Salikov, 2019; Bykov, Medvedeva, & Hradziushka, 2021). Therefore, a possible interpretation of the presence of two Telegram channels, one of which is unofficial, is that anonymous, politicized Telegram channels in Russia are used to extort economic and political actors. The authors of anonymous Telegram channels extort money for avoiding the publication of materials that could somehow denigrate the reputation of high-ranking officials, businessmen, and representatives of regional elites. This practice is called "blocking the negative" (Murtazin et al., 2020; Reiter, Pankratova, & Yapparova, 2023). In the context of the unofficial channel, I rule out such an interpretation. Usually, extortion in the context of Telegram

channels occurs when it is not clear which political elite groups the authors of the channels are associated with. However, here the connection with the main channel of Dialog is obvious. This Telegram channel is dedicated only to what is happening in the regions, which career changes the Regional Management Center has undergone locally, which mistakes regional officials make in communicating with citizens, etc. More details about this point will be provided in the Results section (Figure 5). Therefore, I interpret the existence of the unofficial channel as a way to curb the regional level of governance from wrongdoings by federal authorities.

Since I follow this logic of principal-agents relations, then, I expect that the regions which do not fit to the Kremlin's demands should be the main target of the unofficial channel. The Kremlin is interested in establishing effective administrative and political machines in the regions which have to provide necessary results in elections (through mobilization of certain groups of the electorate, intimidation of independent observers, and manipulation of the election results) (Golosoov & Konstantinova, 2016). It is the main focus of the Kremlin's regional policy, not even the economic success of the regions (Tkacheva & Golosoov, 2019). The economic performance is not so important because of the nature of Russian fiscal federalism when the center collects taxes and distributes them among regions. Regional elites do not have much incentive or resources to do something substantial on this front, except for some outliers with a strong ethnic identity, lobbying and historically good economic capacities (Sharafutdinova, n.d.). Hence, I formulate **Hypothesis 1**: *The less effective the administrative machine of a region, the more criticism the region receives from Moscow.*

Regional Governance Centers were created to ease the communication of citizens with local authorities. As noted above, their task is to demonstrate how effective and fast the authorities can be in their response to the problems of citizens. This task involves the reaction of the Regional Governance Centers to citizens' messages on a variety of social media platforms. But tracking each case of such a reaction is a non-trivial engineering task. However, these Regional Governance Centers also operate their own Telegram channels where

they report the results of their activities and have some audience. These Telegram channels can be used as a proxy for the channels expressing citizens' discontent with the quality of life in the regions because they report solving problems initially indicated by the social media users. Importantly, Telegram's API provides information on how often users of specific channels send messages to other channels or chats. This technological affordance allows me to look at the demand side of the activities by Regional Governance Centers, i.e., what is considered valuable to share or take into account by citizens. At the same time, I must admit that, in this case, we are talking about a narrow segment of citizens who use Telegram.

Thus, I pose the following **Research Question**: *What aspects of the activities of the authorities receive the greatest response from Telegram users?*

2.3 Data and Methods

I specifically focus on the Telegram platform as a place where the communication between the principal (federal authorities) and its agents (regional authorities) happens. There are several reasons to focus on Telegram. First, it is one of the most popular messengers in Russia, surpassed only by WhatsApp if we look at the overall number of users. But Telegram is number one when it comes to traffic²⁷. The platform allows much more affordances for working with media content than WhatsApp, for instance, the launch of channels, sharing videos, the launch of bots, linking them to other platforms, etc. Second, Telegram is the most politicized platform in Russia, on par with YouTube. This platform is relevant for the study of political communication, especially when it comes to elite-level interactions, because elite groups often use anonymous channels to communicate with each other (Salikov, 2019).

Table 1: Description of the corpus

²⁷ Telegram overtakes WhatsApp in terms of traffic for the first time (Telegram впервые обогнал WhatsApp по объему трафика), <https://www.vedomosti.ru/technology/articles/2023/01/23/959995-telegram-obognal-whatsapp>, in Russian, accessed 27 January 2024.

	Dialog related Telegram Channels	Regional Telegram channels
Number of Telegram channels	2	80
Number of actual posts ²⁸	4,718 (3,960)	94,369 (53,697)
Number of views ²⁹	11,042,556	29,848,514
Number of subscribers	14,695	68,277

Telegram data was collected using the Telethon package for Python³⁰, serving as a wrapper for Telegram's API. I examine the content of Telegram channels that cover the activities of Regional Governance Centers as regional project management offices. Specifically, I focus on two Telegram channels related to the Dialog organization who are direct contractors of the presidential administration. Plus, I study the content of 80 regional Telegram channels, which are operated by Regional Governance Centers. Table 1 contains general information about these channels as of the data collection date on October 14, 2023³¹. Since I study unidirectional communication focusing on the content produced and distributed by the Russian authorities and am interested in the direction and volume of the messages the authorities want to deliver, I keep all re-shared/forwarded posts. The volume is crucial because it allows us to see what messages the authorities want people to get.

I use structural topic modeling (STM) to derive the most prevalent topics in the posts promoted by Telegram channels affiliated with central and regional authorities (Roberts, Stewart & Tingley, 2019). First, it is necessary to demonstrate the difference between the official and unofficial Telegram channels affiliated with the Dialog organization. Then, the results of STM will

²⁸ The number of posts in the raw dataset is higher because the Telegram platform API displays photos and videos attached to posts as separate messages. In parentheses, the information for the dataset without photos and videos is presented.

²⁹ Counted only for the text message excluding attached photos and videos.

³⁰ Telethon's Documentation, <https://docs.telethon.dev>, accessed 27 January 2024.

³¹ Data is presented for 80 regions, while Russian authorities claim that the federation consists of 89 regions. Moscow, the Republic of Mari El, the Chelyabinsk Oblast, the Republic of Tyva and the Kurgan Oblast do not have telegram channels, as well as the annexed Ukrainian territories of Kherson, Zaporozhye, Donetsk and Lugansk regions.

be used to explore the demand side of the activities of Regional Governance Centers (technical details are presented in appendices [A](#), [C](#), and [D](#)).

Hypothesis 1 checks the association between a region's criticism from the central authorities expressed by the unofficial Telegram channel of the Dialog and how effectively the region provides demanded election results. Here, it is necessary to clarify how I identified criticism and positive references in the communication of Telegram channels (official and unofficial). Each message in the two channels has a similar structure. Before the main text, the region's name (in the case of an official Telegram channel) or its capital city (unofficial channel) is indicated. In this way, the post is dedicated to only one region, pointed at the beginning of the post (for examples of posts and their structure, see [Figure 4](#)). This pattern has been stable from the very start of the operation of both Telegram channels. Thus, I count how many times, expressed through the number of posts, each region is mentioned in the two channels (capital cities and their regions were matched). Sometimes, in the case of the unofficial Telegram channel, the messages can also be dedicated to a group of regions. In such cases, the authors of the unofficial Telegram channel usually put the “Russia” or “Moscow” tags at the beginning of the post. I exclude such cases from the analysis. To check this assumption about the sentiment of the official and unofficial Telegram channel about the regions (i.e., criticism or positive references), I carefully read a significant portion of the text corpus and also exploited the topic modeling analysis. The results of this analysis will be presented below, with examples of the original posts.

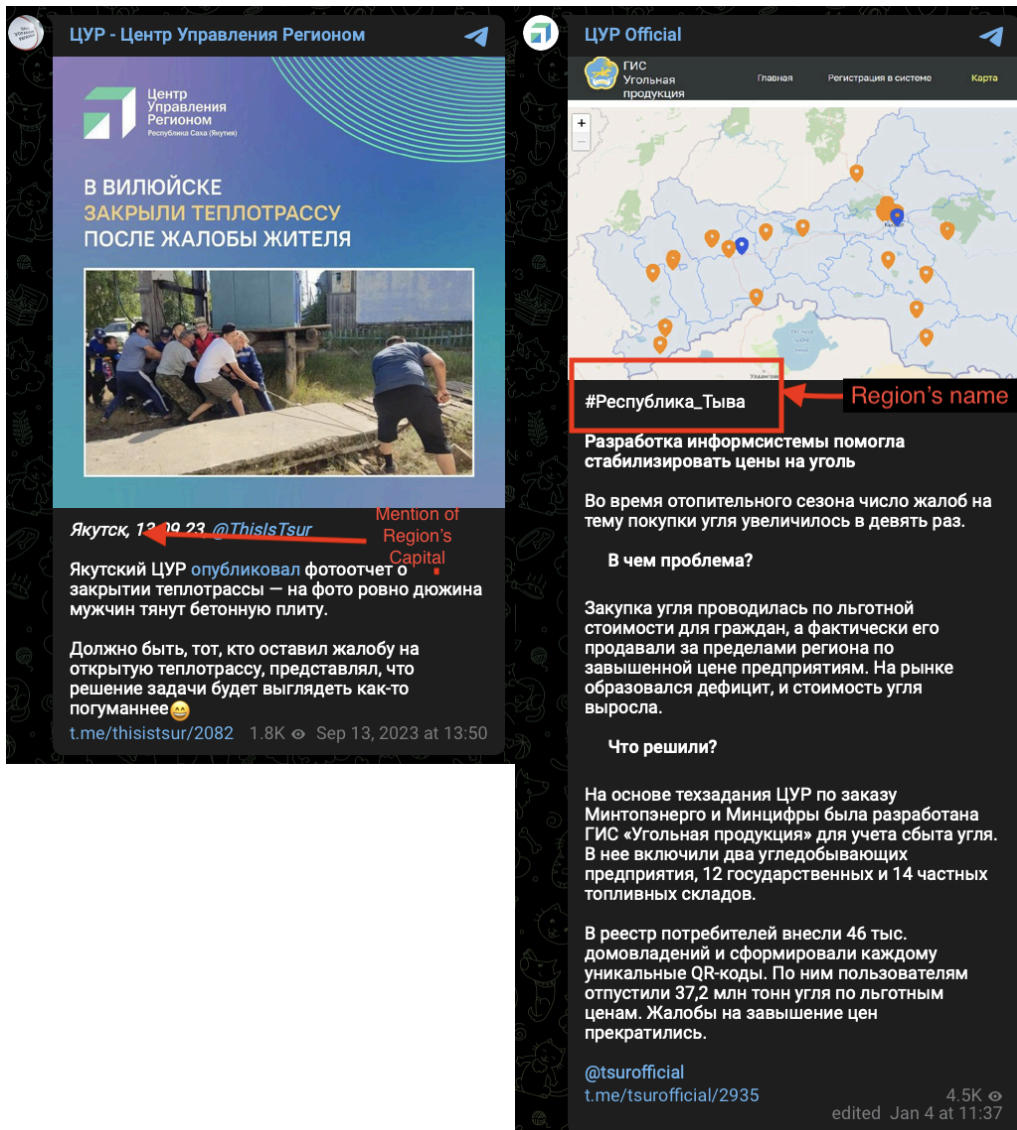


Figure 4. Examples of posts in the unofficial channel (left) and the official channel (right). Posts in the unofficial channel begin with a mention of the region's capital, and in the official channel - with a mention of the region's name. The names of the capital city and its region were matched for further analysis. Link to post on the left - <https://t.me/thisistsur/2082>, link to post on the right - <https://t.me/tsurofficial/2935>.

To check the association between the criticism from the central government targeting specific regions, I run two quasi-poisson regression models (Formulas [1](#) and [2](#)). Quasi-poisson regression modeling was chosen due to having a small sample: 81 observations. The variance is much higher

than the mean for the dependent variable, which is, in the first case, the number of posts devoted to regions in the unofficial Telegram channel (y_i) where the criticism of the regions is presented. For the second model, I use the number of posts devoted to the Russian regions in the official channel (z_i), which reports positive agenda and stories of solving citizens' problems by regional/local authorities.

As the main variable of interest, i.e. the strength of the regional administrative political machines (*PoliticalMachine_i*), I use Putin's results in the last presidential elections that happened in 2018 due to the central role of the president in the political and economic system (Hale, 2016). In the robustness checks, I replaced Putin's presidential election results with the 2020 constitutional referendum results and the results of the parliamentary elections in 2021 and 2016. Then, I control for the economic performance of the region (Treisman, 2011) (*logged gross regional product*) because wealthier regions may spend more financial resources to solve citizens' complaints. The portion of rural population (*logged*) was also included in the model (Saikkonen, 2017; Saikkonen 2023), as well as (3) the general size of the region in terms of the population (*logged*). I added fixed effects with a variable that indicates the federal district where a region is nested (*FederalDistrict_k*). Quite often, regions that are nearby may compete with each other trying to show that they can better and faster achieve the requirements established by the Kremlin. In addition, these same federal districts often create (or considered as) some kind of industrial cluster when, for example, mining takes place in one region and its processing takes place in another, neighboring region. That is a legacy of Soviet industrial policy. And there is an overflow of population into the largest and most powerful regions in the cluster.

Formula 1:

$$y_i = \alpha + \beta * PoliticalMachine_i + \delta * SocEcon_i + \sigma * FederalDistrict_k + \epsilon_i$$

Formula 2:

$$z_i = \alpha + \beta * PoliticalMachine_i + \delta * SocEcon_i + \sigma * FederalDistrict_k + \epsilon_i$$

To study the demand side of the activities carried out by Regional Governance Centers, I first conducted a STM analysis of messages posted by Telegram channels operated by Regional Governance Centers. As a covariate, I use the variable that indicates a region. Then, I used topic proportions to estimate the association between the topic and how many times a message was forwarded. I run a multilevel zero-inflated negative binomial regression of forward counts that a Telegram post receives on the topics. This generalized linear mixed model allows an analyst to account for fixed and random effects when the data is clustered or has a hierarchical structure. Zero-inflated negative binomial models are used when the response variable has over-dispersed count data with an excess of zeros. It assumes two processes: one that determines if an observation is always zero and another that is described by a negative binomial distribution when it is not zero. This regression model is useful because posts are nested within Telegram channels, which indicate/represent Russian regions. The usage of Telegram across the country can significantly vary, and using the multi-level structure of the regression model with level 2 presenting a region / Telegram channel allows us to take into account this variation. Although Formula 3 does not show this complexity, it provides an intuition for the type of association I am checking.

Formula 3:

$$c_{ij} = k_0 + b_j + k_1 * Topic1_i + \dots + k_{12} * Topic12_i$$

In the current setting (Formula 3), the dependent variable (c_i) is the number of times when a Telegram message was forwarded by users, and predictor variables represent different topics (13 topics because k_0 , being an intercept, contains the share for *Topic13*; for more details on why this number

was chosen, see the online appendix). b_j is the random effect for the j-th Telegram channel operated by the Regional Governance Center in a specific Russian region.

2.4 Results

I first focus on the content differences between two Telegram channels related to the Dialog organization - official and unofficial ones.

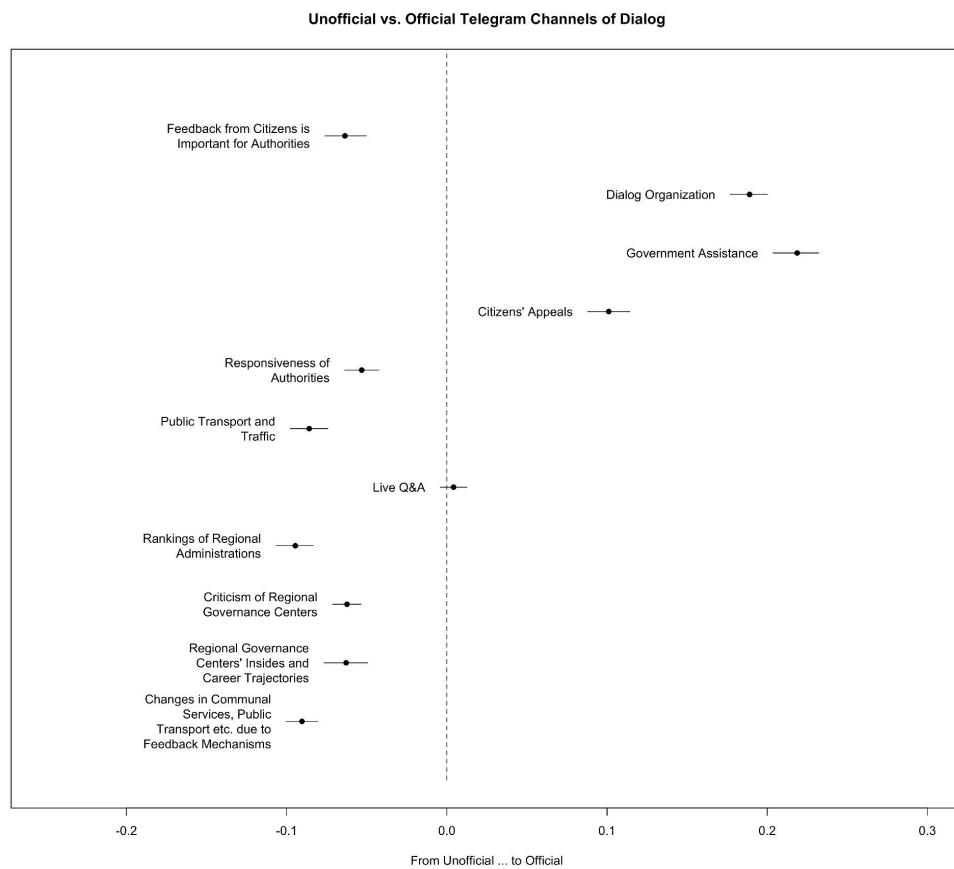


Figure 5 . Difference in topic prevalence by the type of Telegram channels - the official and unofficial channels of the Regional Governance Center (main office). Dots present point estimates for the difference between topic prevalence for two channels. Error lines bracketing the dots are the 99% Confidence Interval (CI) of that difference. Topics with confidence intervals which include a dashed line are not statistically significant.

As can be seen from Figure 5, the unofficial Telegram channel focuses more on insider information about how work is carried out in the territorial branches of Regional Governance Center (Topic “*Criticism of Regional Governance Centers*”). I present the following example as an illustration of this topic in a Telegram post³²:

Maykop, 04.10.21, @ThisIsTsur

The head of the Regional Governance Center of Adygea, Kazbek Kojeshau, published a post on his social media dedicated to the anniversary of the department. The “historical” post is accompanied by a photo of the leader with Fonbet [betting company] in the background.

The post ends with the meaningful conclusion “Now I am different, understanding, studying, and going with all the trends.”

We still remember how at the start of his career, Kazbek supported Navalny. But now Navalny is in prison, and Kazbek is different 😊

Also, attention is paid to the career trajectories of personalities related to the Regional Governance Centers and regional administrations and their ranking according to various indicators, mainly in terms of the degree of openness in communication with the citizens living in the territories they govern. An example of such a post is the following³³:

Russia, 07/28/22, @ThisIsTsur

Traditionally, summer is a time of staff turnover. This trend has not bypassed Regional Governance Centers; many of them are experiencing personnel changes, especially in the team of analysts.

Analysts say one of the main reasons for dismissal is the lack of free time while their friends and colleagues are spending the summer and relaxing.

[However,] The management believes that the next wave of personnel changes should strengthen the Regional Governance Centers. Is it time for resilient employees?

The official Telegram channel tells more about the external component of the activities of the Regional Governance Centers: how they react to appeals

³² Link to the original post in Russian: <https://t.me/thisistsur/827>, accessed 27 January 2024.

³³ Link to the original post in Russian: <https://t.me/thisistsur/1337>, accessed 27 January 2024.

from citizens; the federal and regional governments' reforms in the field of communal services, public transport, social assistance programs, etc.; and initiatives of the Dialog organization to provide better communication tools between authorities and citizens. An exemplary post of this type of communication follows³⁴:

#Kaluga region

Traffic will be adjusted in Kaluga after reports from car drivers

In Kaluga, drivers en masse point out the incorrect cycle of the traffic light - the Regional Governance Center recorded more than 50 messages on this topic. Residents of the neighborhood complained about daily morning traffic jams due to poorly functioning traffic lights.

A video camera was installed to monitor the intersection. For two weeks it will record the density of traffic flows. Based on the results of the analysis of video materials, the city government will determine the optimal duration of the traffic light cycle.

We will definitely return to this topic in two weeks. Let's see how our colleagues deal with traffic.

Overall, the official channel focuses on the positive agenda and the best practices from the regions on how to strengthen the trust of citizens in authorities. Other [examples](#) of Telegram posts related to each topic, as well as tables with the most frequent words, can be found in the appendix [A](#).

To check the expectation that the strength of the regional political machines are negatively correlated with the attacks from the unofficial channel of the Dialog organization, I present the results of the quasi-poisson model for mentions in the unofficial Telegram channel. Table [2](#) demonstrates the negative association of attacks from the unofficial channel with the strength of the regional administrative machines on the 10-percent level. When the federal districts are included, the coefficient lacks conventional statistical significance.

Then, I conducted a sensitivity analysis by substituting Putin's presidential election results with the 2020 constitutional referendum results, as shown in Table [B1](#) of the appendix [B](#). This model specification provides similar results with a statistically significant negative association (at the

³⁴ Link to the original post in Russian: <https://t.me/tsurofficial/273>, accessed 27 January 2024.

5-percent level for a model without fixed effects) between the referendum results and the number of posts criticizing regions in the unofficial Telegram channel operated by the Dialog organization. Next, I measured the strength of the administrative machine using the results of the parliamentary elections on a national level in 2021 and 2016 (Tables [B3](#) and [B5](#) of the online appendix [B](#) respectively). For the latter, the association between criticism from Moscow and the election demonstrates the same pattern reported for the models with the presidential election and the constitutional referendum results. In contrast, there is no statistical significance in the former case (the 2021 parliamentary elections), and the coefficient is substantively small.

This finding can be interpreted as follows. First, in the 2021 parliamentary elections, the electronic voting system, which is completely non-transparent, was used for the first time (Vakarjuk, Snetkov & Willemson, 2022) in some of the regions. This political novation could reduce the demands from the Kremlin on the lower-level authorities to achieve the desired results in the elections, which could be achieved through the cheating of votes in electronic voting. Second, under the conditions of a personalistic regime, presidential elections are much more important, leading to more demands from the Kremlin on the regional authorities to provide the necessary results. In this regard, the referendum on the amendments to the Constitution should be considered from the perspective of the personalistic regime. According to the law, this referendum should not have been held at all, but Putin decided that a national vote during the pandemic should be arranged³⁵. The referendum, being Putin's initiative, instantly became an important stress test for the entire administrative-political machine of the Kremlin. Third, in the robustness checks conducted, the independent variable of interest was operationalized through the results of elections during different periods of authoritarian rule in Russia. Thus, the 2016 parliamentary elections were less manageable for the Kremlin than the following parliamentary campaign in 2021. From this, I can

³⁵ Russia's Putin orders April vote on constitutional changes despite coronavirus, <https://www.reuters.com/article/uk-russia-putin/russias-putin-orders-april-vote-on-constitutional-changes-despite-coronavirus-idUKKBN2143J5>

assume that the results of earlier elections (2016 and 2018) during the period under study depended, to a greater extent, on the ability of regional elites to create effective administrative political machines. The 2016 indicators may better capture this variation in the degree of effectiveness of regional elites than the later period when electronic voting appeared, and the so-called non-systemic opposition was finally taken out of the legal field (for example, Alexey Navalny and his team actively helped independent regional politicians in elections in the 2010s (Dollbaum, Lallouet & Noble, 2021; Turchenko & Golosov, 2020), but now such interaction threatens criminal prosecution³⁶). The referendum on amendments to the constitution stands out from this trend due to the emergency of the very moment of its holding (the height of the COVID-19 pandemic, June 2020). In these circumstances, regional authorities had to make extraordinary efforts to organize the vote. However, many regional administrations failed to cope with the primary task of managing healthcare during the COVID-19 pandemic (Seliverstov, Kravchenko, Klistorin & Yusupova, 2021).

Table 2: Quasi-Poisson model for mentions in Unofficial TG channel

	Dependent variable:	
	Mentions by Unofficial TG channel	
Putin's Results in 2018	-0.023 (0.016)	-0.022* (0.011)
Gross Regional Product, <i>logged</i>	0.090 (0.123)	0.155 (0.115)
Share from the Russian population, <i>logged</i>	0.163 (0.131)	0.175 (0.120)
Rural Population	0.001 (0.008)	0.0008 (0.007)
Intercept	3.656*** (1.298)	3.322** (1.184)
Fixed Effects, <i>Federal Districts</i>	<i>Included</i>	<i>No FE</i>
Observations	81	81
AIC	650.12	664.17

³⁶ Alexei Navalny: Moscow court outlaws 'extremist' organisations, <https://www.bbc.com/news/world-europe-57422346>, accessed 27 January 2024.

Dispersion	4.328	4.293
Standard error for a quasi-poisson model are in parentheses	*p<0.1; **p<0.05; ***p<0.01	

In the case of mentions of regions on the official Telegram channel, where a positive agenda and success stories of Regional Governance Center are described, the economic development of the region is statistically significant in all the specifications (Table 3, and Tables B2, B4, and B6 of the appendix B). Recall that I did not detect such a connection with economic performance for models with mentions by the unofficial Telegram channel as the dependent variable. In addition, a variable that reflects population size is also statistically significantly associated with the positive agenda of the official Telegram channel (on the 10 percent level). Smaller regions in this regard are also more often mentioned in the official channel. I interpret these observations in a way that richer regions have more resources to spend on communal services and health and launch some social assistance programs. Such initiatives and projects are an important part of the success stories in solving residents' problems promoted by the official Telegram channel.

In addition, a variable that reflects population size is also statistically significantly associated with the positive agenda of the official Telegram channel (on the 10 percent level) in some models (Table 3, and Tables B2, B4, and B6 of the appendix B). Smaller regions in this regard are also more often mentioned in the official channel. The region size may show statistical significance for several reasons. On the one hand, the federal authorities can thus pursue a positive discrimination policy, demonstrating the successes of sparsely populated regions to show that even in such places, the authorities are actively improving the lives of citizens. On the other hand, sparsely populated regions are traditionally located in the north of the country, where gas and oil are produced. In such regions, economic indicators are also high, which is consistent with the previous result on the statistical significance of the region's economic strength for a positive assessment by the official Telegram channel of the Dialog organization.

Table 3: Quasi-Poisson model for mentions in Official TG channel

	Dependent variable:	
	Mentions by Official TG channel	
Putin's Results in 2018	-0.010 (0.013)	-0.0004 (0.009)
Gross Regional Product, <i>logged</i>	0.300*** (0.095)	0.243*** (0.086)
Share from the Russian population, <i>logged</i>	-0.163* (0.095)	-0.056 (0.085)
Rural Population	-0.002 (0.006)	0.0004 (0.005)
Intercept	1.620 (1.039)	1.493 (0.915)
Fixed Effects, <i>Federal Districts</i>	<i>Included</i>	<i>No FE</i>
Observations	81	81
AIC	716.82	736.28
Dispersion	4.568	4.734
Standard error for a quasi-poisson model are in parentheses	*p<0.1; **p<0.05; ***p<0.01	

2.4.1 Regional Governance Centers as Mediators in Federal Center-Regions Interaction

I consider the communication mechanism introduced by Russian central authorities through the lens of the institutional interaction between the principal (the federal level of governance) and the regions. In this sense, the territorial branches of the Regional Governance Centers are situated somewhere in between. On the one hand, they are created by the Dialog organization, i.e., by the direct contractor of the presidential administration. On the other hand, these project management offices are incorporated into the regional level of governance; they actively communicate with the regional authorities, who are interested in making these Regional Governance Center more loyal to them. This ambivalence can be observed in the topics of regional Telegram channels.

I run an STM model with the status of the message (it is originally produced by the regional channel or forwarded from other channels) as a covariate. As shown in Figure 6, forwarded messages are about the Dialog

organization, posts directed from the central level of governance (about social assistance programs), and messages from the channels directly affiliated with the regional administration or regional governor (like announcements of live Q&A sessions), etc. I present the following example as an illustration of this pattern of communication in Telegram posts³⁷:

Live broadcast on legal issues!
Aleksey Preobrazhensky, Deputy Head of the Administration of the Governor of the Ulyanovsk Region - Head of the State Legal Department, will answer all relevant questions on the topic that are of interest to our subscribers on the air of the Regional Governance Center of the Ulyanovsk Region.
Watch the broadcast on July 19 at 11:00
You can ask your questions in the comments to the live broadcast on VKontakte and Odnoklassniki.

Original posts, to a greater extent, focus on topics related to education and schools, helpful information about opportunities that citizens can gain, etc. Announcements of new ways to communicate with authorities (like chatbots on different platforms) are at the intersection of two categories of messages. Here is the example³⁸:

On the Government Services portal you can now order a certificate or confirmation letter from the registry office and pick it up at the nearest department or Multifunctional Center (MFC)
To apply for a confirmation or any certificate, you need a verified account on the Government Services. When filling out the application, select a convenient registry office or MFC, the date and time of receipt of the document.
If you are receiving a certificate for the first time, you do not need to pay for it. If you order a repeated certificate or certificate, pay the fee.
You can obtain a paper certificate or confirmation at any registry office or MFC, regardless of your residence address.

Other [examples](#) of Telegram posts related to each topic, as well as tables with the most frequent words, can be found in the appendix [D](#).

³⁷ Link to the original post in Russian: <https://t.me/tsur73/3666>.

³⁸ Link to the original post in Russian: <https://t.me/tsur56/1439>, accessed 27 January 2024.

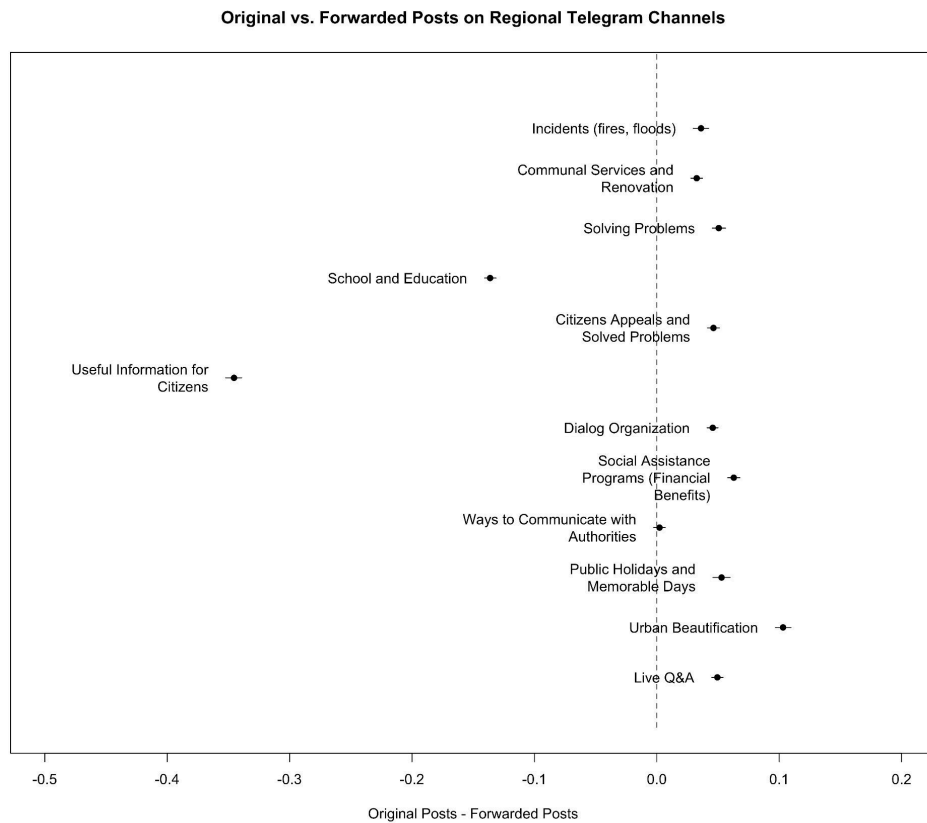


Figure 6. Difference in topic prevalence in two groups of Telegram messages: Forwarded vs. Original posts of regional Telegram channels. Dots present point estimates for the difference between topic prevalence for two types of posts. Error lines bracketing the dots are the 99% Confidence Interval (CI) of that difference. Topics with confidence intervals which include a dashed line are not statistically significant.

2.4.2 The Demand Side of the Activities carried out by Regional Governance Centers

Telegram users can distribute messages from public channels to their peers in this messenger or repost to other channels/groups if they can administer them. This opens up the opportunity, at least partially, to evaluate how the popularity of different topics varies in the Telegram channels of the Regional Governance Centers, which are directly dedicated to working with the population in the regions. Table [4](#) attempts to answer this question using the

results of the structural topic modeling and a zero-inflated negative binomial mixed regression model. This model predicts the number of times when a post was shared by the users or other Telegram channels, based on 13 topics, while accounting for individual differences among Telegram channels operated by the Regional Governance Centers in 80 Russian regions. The structure of the STM model, which was used to extract topic shares, differs from that used in Figure 6 because the covariate here is the region that the Telegram channel represents.

Table 4: Zero-inflated negative binomial regression of forward counts, Count model coefficients

	Dependent variable: Count of Forwards
Live Q&A	0.163 (0.113)
Refuting fakes	-1.211*** (0.130)
Public Holidays and Memorable Days	-1.546*** (0.122)
Ways to Communicate with Authorities	-0.175 (0.132)
Social Assistance Programs (Financial Benefits)	-0.269*** (0.118)
Non-Commercial Organization Dialog	-1.730*** (0.123)
Useful Information for Citizens	0.431*** (0.121)
Citizens Appeals and Solved Problems	-1.887*** (0.123)
Easy Ways to Communicate with Authorities	-0.701*** (0.161)
Solving Problems	-1.887*** (0.112)
Communal Services, Urban Beautifucation	-1.733*** (0.131)
Incidents (fires, floods)	-0.722*** (0.166)
Baseline (School and Education)	0.922*** (0.151)
Observations	53,567
Number of Groups	80
AIC	6,066.8

*p<0.1; **p<0.05; ***p<0.01

Table 4 demonstrates that people share messages directly related to them and their family members (topic *School and Education*) and from which they can somehow benefit (topic *Useful Information for Citizens*). Here is the example of such posts³⁹:

Admission to Maikop Polytechnic College
We continue to inform you about the admission campaign to colleges
In a video prepared jointly with the Republican Ministry of Education,
they talked about the Maykop Polytechnic College.

Exponentiating the coefficient for the topic *Social Assistance Programs (Financial Benefits)* gives 0.76, which means the expected count of forwards for messages about social assistance from the government is 76% of the expected count for the baseline category (topic *School and Education*), holding all else constant. Thus, users also share these posts relatively frequently. I illustrate this topic with the following example⁴⁰:

Regional Governance Center informs
In the Vladimir region, a single monthly allowance was approved for 22,000 children in two months. This type of state support is individual: 50, 75 or 100% of the cost of living in the region (13,944 rubles). It is prescribed to low-income families and pregnant women.

From January 1, 2023, the Unified Benefit combined a number of existing social payments:

- monthly allowance for women registered in the early stages of pregnancy*
- child care benefits for unemployed citizens*
- monthly payment in connection with the birth (adoption) of the first child under 3 years of age*
- monthly payment at the birth of the third or subsequent children under 3 years of age*
- monthly payment for a child aged 3 to 7 years*
- monthly payment for a child aged 8 to 17 years*

Families have the right to choose which benefits to remain on – those already issued or switch to universal ones.

An application can be submitted:

- through the public services portal*
- through Multifunctional Centers*

³⁹ Link to the original post in Russian: <https://t.me/tsur01/2028>.

⁴⁰ Link to the original post in Russian: <https://t.me/tsur33/956>.

- in person at the Social Insurance Fund of the Vladimir Region

After exponentiation, messages highlighting how it is easy to keep in touch with authorities (topic *Easy Ways to Communicate with Authorities*) comprise around 50% of the expected count for the baseline topic about school and education. The difference between this topic and a similar one (*Ways to Communicate with Authorities*) is that the latter is more official, while the first talks about specific examples of using communication tools to solve citizens' problems. In addition, posts about emergencies (fires, floods, road accidents, etc.) are also approximately half of the expected count of forwards for the most shared topic, *School and Education*, which is a baseline. Other topics in messages are disseminated by users much less often. [Examples](#) related to each topic and tables with the most frequent words can be found in the appendix [C](#).

2.5 Conclusions

In this chapter, I demonstrated how Russian authorities use communication as a tool for the crucial task of maintaining their dominance. If, in the case of the non-systemic opposition, which clearly expresses its claims to change the political regime, the emphasis is made on polarization and the “*us vs. them*” conflict, then concerning the loyal part of the population and its agents (regional and local authorities), the Kremlin uses more flexible approaches.

No matter how centripetal the processes of governance are in the hardening autocratic regime in Russia, the presidential administration, which is responsible for managing domestic political processes, encounters a typical problem of principal-agents relations. The lower levels of government (regional and local) may have their own interests in fulfilling the central government's directives or do not have the resources to organize effective governance in their respective territories. The response to this challenge was the system of communication between the authorities and citizens on social media, created in 2018–2020, which allows the central authorities to monitor the actions of their agents on the ground.

Thus, we see how the Kremlin first relies on complaints from citizens to estimate how the lower levels of governance perform and actively sends signals hinting that even internal processes within regions are monitored by the Kremlin. The content of the unofficial Telegram channel related to the Dialog organization speaks about it. Second, the unofficial channel primarily attacks those regional elites who failed to establish effective political machines. The statistical significance is present, but it is not stable when it comes to alternative ways to express the strength of administrative machines. However, the direction of this association remains the same. Third, when presenting success stories, attention is paid to the regions with the resources to solve citizens' problems effectively and faster (economically strong territories). Fourth, Regional Governance Centers in the territories encounter ambivalence when they have to follow the requirements established by the presidential administration and the interests of regional elites because they actively interact with them. Fifth, when it comes to the demand side (i.e., what is interesting to the audience of regional Telegram channels), the messages containing information from which citizens can benefit are shared the most. It is primarily information about education, bureaucratic guidance, and, to a lesser degree, social assistance and how to communicate directly with officials.

This analysis does not represent a comprehensive approach to studying the communication strategy exploited by the Russian authorities to keep the population loyal. Specifically, the reaction to criticism from the federal level and the subsequent behavior of regional elites can be one possible direction to develop this topic. To do so, in my future research, I intend to use a difference-in-differences strategy where I would like to look at the behavior of Regional Governance Centers before and after they are mentioned by the central authorities in Moscow (both critically and positively). The following behavioral aspects can be examined: the number of posts produced by the regional Telegram channels; the number of incidents Regional Governance Centers administer and finally resolve. Moreover, it makes sense to consider other platforms like VK (VKontakte) and track the behavioral patterns there. Next, the relevant question is how substantive the responsiveness of regional

and local authorities is after such interventions by the federal authorities, i.e., how effectively this online complaint system solves problems reported by citizens (Lueders, 2022). In this sense, the explorative study of the reports made by Regional Governance Centers can benefit from a more granular approach for distinguishing substantive and performative responsiveness (Ding, 2020; Ding, 2022). For example, one could study how much of the Regional Governance Centers' reports consist of informative posts about events or assistance programs, which do not imply the substantive reaction to citizens' complaints, versus reports of solved problems and how this varies from region to region and over time. In addition, Telegram's API does not make it possible to isolate what type of users forward posts. These can be both ordinary users or other government-affiliated accounts or, for example, bots. Last but not least, the sources of authoritarian responsiveness can be examined by implementing the online field experiment audit type (Chen, Pan, & Xu, 2016; Costa, 2017).

The next chapter is devoted to the opposition's communication strategy to change the political status quo in the authoritarian context. I am studying how the country's most vocal opposition politician, Alexei Navalny, uses the strategy of polarizing the political narrative using the example of his primary media resource - the YouTube channel, which hosts anti-corruption investigations against representatives of the country's ruling regime. I will demonstrate what kind of community has formed around this media resource and how it has become a platform reflecting the contradictions between Navalny's supporters and pro-government forces.

Chapter 3. Opposition: affective polarization and cross-cutting disagreement

As shown in the previous two chapters, Vladimir Putin's regime, on the one hand, underwent a gradual evolution from a relatively competitive system with free media, as was the case in the first couple of years of his first presidency, to a closed autocracy, when the political persecution of opponents of the regime became utterly open. Moreover, even in the current, more stringent, repressive conditions, the government tries to speak differently to different groups of citizens depending on their loyalty, as shown in Chapter 2. But how does the opposition try to impose its narrative in such conditions? Moreover, I pay close attention to feedback from users who receive this content because it is essential for the opposition in restrictive political circumstances to mobilize supporters for collective action via social media. How do audiences react to content promoted by the opposition? What is happening in the community of Alexei Navalny, the country's most vocal opposition politician, when it comes to the interaction between different users regarding their support for the opposition and the government, respectively? These questions will be answered in this chapter.

When society is largely depoliticized, the opposition's strategy is to increase the level of interest in politics and the political awareness of citizens. In this regard, the most important resource is access to the media, as well as the ability to evoke an emotional reaction to the political and media product of the opposition. The latter process in an authoritarian context is also determined by the actions of the government to counteract the opposition. In this sense, Alexei Navalny has managed to create an impressive infrastructure of various media tools that exploit a variety of genres and formats.

Generally, political preferences are formed not only through structural factors like social and economic cleavages, political strategies, and ideologies but also through a cognitive process. In this regard, the context in which preferences and group identities are formed becomes important. Initially, identity provides cognitive heuristics to orient in the political space. And the

context helps to compare oneself with other groups; that is, it also forms an identity.

Nugent reveals causal mechanisms of affective polarization in autocracies, using examples of regime change and evolution in Egypt and Tunisia (Nugent, 2020 a). In doing so, she considers polarization between parties after regime change, that is, the overthrow of an authoritarian ruler. However, the mechanisms underlying the polarization caused by government repression also deserve special mention. The key element in the causal mechanism of polarization is the repression carried out by the autocrat. If a particular group is repressed while other opposition organizations can function without facing serious persecution, then in the ensuing regime transition, there is a high chance that the opposition will be polarized and not ready to adhere to democratic ideals to establish a genuinely democratic regime. If the trauma of repression is shared by many, if not all, opposition groups, then intergroup identity becomes stronger and there is less pronounced polarization between opposition groups. The nature of repression first determines the formation of political identities. Next, political identity (strong intergroup solidarity vs. in-group isolation) determines political preferences, emotions, and affect. Further, repression in an authoritarian context also affects the social environment, i.e., whether the groups that are being persecuted are forced to leave the country or remain there. The experience of repression also changes the organizational structure of opposition groups because the openness of the structure can be fatal in the face of severe persecution by an authoritarian regime.

Nugent's attention is focused on regimes that are characterized as electoral autocracies. Putin's Russia, before the start of a full-scale invasion of Ukraine in 2022, was characterized by many researchers in the same way. I do not test the causal mechanism described in Nugent's work concerning the period when the authoritarian ruler does not face a rupture. Nevertheless, I argue that it makes sense to consider the causal mechanism of the formation of affective polarization in the context of the confrontation "regime vs. the opposition demanding regime change" as well.

I argue that polarization in conditions where authoritarian rule is present occurs on both sides. And an important role in this process is played by the media, which can be attributed to the organizational aspect of the polarization. In 2013–2021, the media space in Russia was characterized by a limited degree of freedom, although there were active processes initiated by the Kremlin to limit the opportunities of the opposition.

3.1 Political discussions in online oppositional communities in the non-democratic context

“Architecture of participation” of the Web 2.0 era (O’Reilly, 2005) centered on the interaction of users with each other, significantly changed not only the media environment but other public spheres, including politics. In political communication, technological innovations begin new practices of media consumption which lead to a new form of polarization - affective (Iyengar, Sood, & Lelkes, 2012; Iyengar & Westwood, 2015) with a profound effect on the political process for various types of regimes, including authoritarian regimes (Nugent, 2020 b; Enikolopov, Makarin & Petrova, 2017; Enikolopov, Makarin & Petrova, 2020). This chapter describes the dynamics of political discussions in the community of Alexei Navalny on YouTube, the key medium for promoting the agenda of Russia's most vocal opposition politician, through the prism of affective polarization theory.

Social media facilitates the encounter of people with opposing viewpoints, exacerbating polarization via the process of sorting when major divisions in society become all-encompassing (Törnberg, 2022). Therefore, it is necessary to understand how different users - those who support Navalny and those who oppose him - interact with a community formed around the leader of the opposition.

I focus on the extent to which Navalny's activities lead to the formation of a community of users who engage with his content in the long run. Affective polarization is also associated with lower expectations about public deliberation which happens due to the prevalence of incivility, hate speech, and

other forms of identity attacks in online public debates (Hwang, Kim & Huh, 2014; Harel, Jameson & Maoz, 2020). Therefore, **my first research question** is formulated as follows: *What are the characteristics of political discussions in the YouTube community of Alexei Navalny from the perspective of (1) the content, (2) its degree of incivility, (3) the composition of the participants, and (4) the longevity of their interactions with other community members?*

My focus on Navalny's YouTube channel is also because of the twofold role of this platform in the Russian media system. On one hand, YouTube serves as a platform that promotes oppositional viewpoints, bolstering the political influence of independent activists (Litvinenko, 2021). Additionally, its foreign ownership means that the Russian government lacks access to users' personal data, a crucial factor in enabling relatively unrestricted expression of ideas. By evoking emotional resonance (Papacharissi, 2014) through exposés on the prevalent corruption within the ruling elite and Russia's stark social disparities, Navalny adeptly reached beyond an established community. He successfully rallied and mobilized diverse dissatisfied groups. Active user engagement, such as likes and comments, amplifies the visibility of investigative videos through YouTube's recommendation system and Trending tab. Without the capabilities afforded by YouTube, now a primary entertainment platform in Russia, Navalny's audience and political movement would have faced significant challenges in contending with entrenched state propaganda and administrative political machinery. Thus, **my next research questions** are the following: *(1) What are the potential and limits of incivility, as a hallmark of affective polarization (Suhay, Bello-Pardo & Maurer, 2017), in fostering political discussion? (2) How do users engage with the pro-government narrative presented within the community of the most outspoken opposition figure?*

Authoritarian regimes consider opposition leaders who can offer an alternative political agenda and create mechanisms for the mobilization of dissent as an existential threat (Tucker, 2007). Uncontrolled collective action can nullify a regime's efforts to spread political apathy. Therefore, autocrats eagerly seek ways to create the costs of participation in collective action,

including suppressing dissent. Eventually, *the free-rider* problem becomes a key challenge for social and political change in autocracies (Olson, 1971). However, in the era of social media, independent activists have the opportunity to solve this problem through *direct casting* (Bastos, Raimundo & Travitzki, 2013), which allows emotions to be created and accumulated as *affective publics* (Papacharissi, 2014) with the potential to generate communities, a crucial prerequisite for successful collective action. Alexei Navalny is an example of how these mechanisms can turn a niche activist specializing in anti-corruption investigations into the leader of the entire opposition camp in Russia with an infrastructure for organizing a countrywide protest.

The relevance of such a study on the nature of communication under authoritarian rule lies in the following two features of the political regime. First, as was noted above, contemporary authoritarianism is predominantly informational (Guriev & Treisman, 2022). Violence, as the main means of maintaining power, has been replaced by autocrats' work with public opinion and electoral procedures. The image of an effective ruler who can provide citizens with an acceptable quality of life is an important factor in the autocrats' legitimacy. This study covers the period from 2013 to 2021, when the political regime established in Russia could be characterized precisely by this definition of informational autocracy. Second, mass protest collective actions are a critical juncture for contemporary autocrats because the risk of losing power increases significantly at such moments. The mechanism of this process goes through the loss of confidence on the part of citizens and a possible split in the elites' power configuration (Bratton & van de Walle, 1994). Alexei Navalny's activities, including the media products his team releases, strain the autocratic regime in these two key dimensions: (1) they criticize a country's leadership and (2) seek to bring people to the streets for rapid political change.

Empirically, I start by providing information about (a) the comments' quantity change over time and (b) the level of inequality in the distribution of comments by users. Then, the topical representation of the discussions in the comment section on Navalny's YouTube channel is presented. Next, the identity of commenters was studied considering (1) which videos attracted new

commenters the most; (2) contribution to the discussion by one-off and prolific commenters; and (3) the periods of public interest in Navalny when one-off and prolific commenters came to his community. I then consider the dynamics of the outflow of commenters who first began to comment during a period of high interest in Navalny and when interest was below average. Such a retention analysis was carried out for the entire conglomerate of commenters and for those who, during their first entry into the discussion, demonstrated partisan (pro-government *vs.* opposition) cues. I study toxicity in conversations and contrast it with a universe of comments from an apolitical celebrity channel to establish a baseline for the level of incivility. Next, logistic regression models and local polynomial fits are used to study the relationship between conversations and incivility. Then, I show how the level of toxicity changes over time. Finally, to identify pro-government and pro-opposition comments and detect cross-cutting disagreement, I trained a supervised machine learning model—the class affinity model (Perry & Benoit, 2017)—based on a dictionary with derogatory words applied to Navalny and his supporters, Putin and the government.

The main takeaways from this chapter are as follows. First, the cohort of commenters who first engaged with Alexei Navalny's YouTube content during a period of high public interest in the politician's activities was less likely to stay in the community for the next 15 months. Those who started to comment when there was no high public interest in Navalny, in the long run, linger more in the community of Russia's most vocal opposition politician. Second, videos attracting newcomers are most concerned with resonant anti-corruption investigations against high-ranking Russian officials and the failed attempt to poison Navalny by security forces. Third, one-off commenters (i.e., those who write a comment only once and do not contribute to the discussion) appear more often during periods of high interest in Navalny, while prolific commenters join predominantly when public interest in the Russian opposition leader is below average. Although one-off commenters outnumbered those who commented more frequently, the latter contributed eight times more to the production of comments. Fourth, the prevalent topics in

discussions are related to praising Navalny's activity, criticism of the government, and the inducement of spreading videos to change the minds of apolitical citizens or pro-government supporters. Fifth, the level of incivility in Navalny's community was higher than that of an apolitical celebrity YouTube channel. Sixth, top-level comments that open discussions tend to be more uncivil than those without discussion threads. But toxicity has its limits. Users are not willing to dispute with those who spread extreme forms of incivility with a null potential to deliberate. Seventh, the level of incivility of comments gradually goes up with time passing after a video release during the first 14 hours and then stabilizes for top-level comments that have discussion threads and thread comments themselves. Finally, pro-government comments (1) attract Navalny's supporters, who respond to the out-group criticism, and (2) contribute to the emergence of pockets of a pro-government narrative.

The remainder of this chapter is organized as follows. I start with a presentation of the role of Alexei Navalny in Russian politics in the period under study (2013–2021). I also describe how YouTube became the main independent platform where different segments of Russian politicized communities can find whom to follow. I continue with the state of research on political polarization, with a specific focus on social media in the process of affective polarization. I then outline the research questions and hypotheses. In the Data and Methods subsection, a brief description of the data sources and research strategy is presented. I conducted an empirical analysis of discussions, applying text-as-data approach techniques, cohort analysis, and the comparison of toxicity levels in conversations with an apolitical celebrity community. In the Conclusion subsection, I point out the main results of the study, its limitations, and perspectives for future research.

3.2 Navalny's role in Russian politics and YouTube as a platform for the dissent

The political career of Alexei Navalny started in 2007-2008 with anti-corruption investigations in Russian state-owned corporations. Navalny practiced the “greenmail” tactic. According to it, an individual buys a small but

sufficient share in a company, and then, using his right as a minority shareholder, requires the disclosure of documents on transactions and decisions of the top management. In the case of refusal, this person can sue. “Greenmail” is a legal process, widely used in the corporate world. However, in Russia, where almost all large state-owned companies have become a source of enrichment for the ruling class, such activity immediately attracted the attention of authorities, making Navalny's activities both economic and political⁴¹.

The de facto leadership of Alexei Navalny in the Russian opposition camp has been reflected in several studies. During the 2011-2012 protests in major Russian cities, Navalny was one of the main organizers and vocal politicians in “a rather loose conglomerate of relatively small groups and public figures, with little experience and limited capacity for cooperation” (Gel'man, 2015). To prevent a legitimacy crisis and enlarge the scope of activity, the leaders of the movement attempted to transform it into a more formalized and structured - “organizationally brokered collective action network” (Bennett & Segerberg, 2012). This new structure was called “the Coordination Council of the Opposition” and was formed via Internet elections in 2012. Without any significant achievements, this council ceased to exist in October 2013 (Toepfl, 2016). However, Navalny successfully exploited the legacy of the 2011-2012 protest movement for free and fair elections in the 2013 Moscow mayoral campaign (Smyth & Soboleva, 2016) and, subsequently, in the 2018 presidential campaign when the nationwide network of Navalny's supporters was created (Dollbaum, Semenov & Sirotkina, 2018).

Alexei Navalny was actively criticized for his nationalistic beliefs. It was a mix of ethnocultural understanding of the concept of “nation” with a strong pro-European orientation (Moen-Larsen, 2014; Laruelle, 2014). However, by 2020, he had become a leader of the entire oppositional movement, promoting nationwide strategies of political action (anti-corruption

⁴¹ Кто устроил охоту на Навального (in Russian) - Who initiated the hunt for Navalny, at <https://istories.media/investigations/2020/09/17/kto-ustroil-okhotu-na-navalnogo/>, accessed 31 October 2022

rallies, tactical voting to deprive the ruling United Russia party of votes in local and regional elections (Turchenko & Golosov, 2020). Navalny's popularity has increased incrementally, at least until his return to Russia in 2021 and almost immediate imprisonment⁴².

Such growth of Navalny's popularity could hardly have been possible without digital platforms such as YouTube, which are gaining more Russian users. YouTube is one of the most widely used social media platforms in the country⁴³. This presents a trustworthy medium for oppositional politicians to promote their content⁴⁴. Political communities form around video bloggers, such as Alexei Navalny, Nikolai Bondarenko⁴⁵, Mikhail Svetov⁴⁶, and others. According to Medialogia, a Russian marketing research company⁴⁷, Navalny's YouTube channel is among the most popular Russian channels on this platform (ranging from the 14th position to the 7th by each month in 2020) and the highest-rated channel that specializes in Russian politics.

Due to the state control of federal television, from which a significant number of Russians obtain political information⁴⁸, many journalists migrated to YouTube. The platform offers several ways to monetize content, in addition to native advertising integration. In combination with the availability of technical devices for high-quality video recording, monetization opportunities significantly affect the quality of media content. Undoubtedly, Russian YouTube is professional and outperforms other media in terms of user attention (Belinskaya, 2021).

⁴² Протесты и Навальный (in Russian) - Protests and Navalny, at <https://www.levada.ru/2017/07/17/protesty-i-navalny/>, accessed 27 January 2024.

⁴³ Most used social media platforms in Russia as of October 2021, by monthly publications, <https://www.statista.com/statistics/284447/russia-social-network-penetration/>, accessed 24 January 2024

⁴⁴ Anna Litvinenko, 2021. "YouTube as Alternative Television in Russia: Political Videos During the Presidential Election Campaign 2018," *Social Media & Society*, volume 7, issue 1 (16 March), at <https://doi.org/10.1177/2056305120984455>, accessed 19 November 2022.

⁴⁵ YouTube channel of Nikolai Bondarenko, at https://www.youtube.com/c/bondarenko_blog/, accessed 27 January 2024.

⁴⁶ YouTube channel of Mikhail Svetov, at <https://www.youtube.com/c/SVTVofficial>, accessed 27 January 2024.

⁴⁷ Рейтинг Медиалогии (in Russian) - Medialogia ratings, at <https://www.mlg.ru/ratings/socmedia/youtube/10332/>, accessed 27 January 2024.

⁴⁸ Основные источники информации россиян (in Russian) - Main information sources of Russians at, <https://www.levada.ru/2022/11/03/osnovnye-istochniki-informatsii-rossiyan>, accessed 27 January 2024.

On YouTube, Russian users have more opportunities to consume politicized content. This goes along with the conception of gatekeeping in digital media when outsider media actors practice neither broadcasting nor narrowcasting, but *direct casting* (Basto, Raimundo & Travitzki, 2013). A popular platform, VK.com (Poupin, 2021), suffers from the punishing practice of censorship that anti-extremist police forces use to gain career promotion after fabricating cases against those who criticize authorities, or only “like” comments with criticism⁴⁹. Facebook and Twitter, as platforms where people discuss politics, may be relevant only for a narrow audience, predominantly from Moscow and Saint Petersburg⁵⁰ (on Twitter, Navalny's blog is the most popular for the Russian audience⁵¹).

Anonymity when expressing political thought is strong in a non-democratic context (Jardine, 2016). YouTube, as a platform where users pay little attention to their profiles, provides relative anonymity and safety, which allows commenters some freedom to express their thoughts (Halpern & Gibbs, 2013). Moreover, the platform has a foreign origin, which implies that the Russian government cannot access users' personal data. Thus, political discussions on Russian YouTube are vivid and video bloggers are free to publish political content. Navalny benefited the most from such institutional arrangements of *direct casting* in comparison with other independent activists, becoming the most vocal opposition politician in Russia.

3.3 Affective publics, affective attunement, and affective polarization

Digital technologies based on the interaction of users through the content they produce (the concept of Web 2.0 (O'Reilly, 2005) have opened up

⁴⁹ Новый худший год. Главное из доклада "Агоры" о свободе интернета в России (in Russian) - New bad year. Key takeaways from Agora's report on internet freedom in Russia, at <https://www.bbc.com/russian/features-47123831>, accessed 27 January 2024; Свобода интернета 2019: план "Крепость". Совместный доклад Агоры и Роскомсвободы (in Russian) - Internet Freedom 2019 in Russia: Fortress Plan. A joint report by Agora and Roskomsvoboda, at <https://2019.runet.report>, accessed 27 January 2024

⁵⁰ Социальные сети в России: цифры и тренды, осень 2019 (in Russian) - Social media in Russia: data for autumn 2019, at <https://br-analytics.ru/blog/social-media-russia-2019/>, accessed 27 January 2024

⁵¹ ТОП-20 микроблогов в Twitter - август 2020 (in Russian) - Top 20 bloggers on Twitter, August 2020 (in Russian), at <https://www.mlg.ru/ratings/socmedia/twitter/7718/>, accessed 27 January 2024

new prospects for collective participation in politics. This applies not only to new forms of participation, specifically in the online domain (Spaiser, Chadeaux, Donnay, Russmann, & Helbing, 2017; Morales, 2019; Pan & Siegel, 2019; Miller, 2022), but also to more efficient coordination (Enikolopov, Makarin & Petrova, 2017; Enikolopov, Makarin & Petrova, 2020) and the overall lowering of the entry barrier into the lists of public opinion leaders or *influencers* whose opinions others begin to orient (Bastos, Raimundo & Travitzki, 2013). On the other hand, in new technological circumstances, collective actions have an ad hoc, or sporadic, nature, and basically create a “feeling of community” rather than the community itself (Dean, 2010). Researchers identify such communities as *affective publics* (Dean, 2010) or *affective networks* (Papacharissi, 2014). Affect is not the emotion itself but its intensity (Papacharissi, 2015). One manifestation of this phenomenon can be observed in the process of *connective effervescence* when users write emotionally filled messages if they encounter a situation that causes a sense of threat (Ventura et al. 2021).

Since affective publics (or networks) are based on disruptions of the dominant political narrative (Papacharissi, 2015), these concepts are of great interest for the study of non-democracies, where people are still able to exchange their opinions but have restrictions to act collectively. In such circumstances, political activists who are not afraid of being vocal in criticizing a country's leadership (Toepfl, 2020) can form communities initially bound by affective attunement and then organize more formally. Alexei Navalny, who started his political career with anti-corruption investigations against high-ranking Russian officials, created an effective infrastructure for regional activists, capable of struggling with administrative political machines by 2018. His strategy differs from that of a typical blogger, trying to attract a large audience and generate revenue from advertising. Navalny's goal is to organize collective action straining the regime's legitimacy, which leads to the polarization of the political landscape.

A stream of political science literature on *affective polarization* should not be avoided in discussions of users' engagement with media content based

on *affect*. Affective polarization has its roots in a person's social identity (1) cultivated from early childhood, (2) subsequently actualized repeatedly during frequent election campaigns of various levels (Iyengar, Lelkes, Levendusky, Malhotra, & Westwood, 2019), (3) and maintained by media resources that interpret political processes by partisan inclinations (Druckman, Levendusky, & McLain, 2018). As a result of the emotionally fueled rather than ideologically charged division of the world (*us* versus *them*), politics as a process is perceived as a zero-sum game (Levendusky, 2013). Social media platforms are not an arena for deliberation but a space for identity formation (Törnberg & Uitermark, 2021). New digital technologies facilitate interaction with the other side (Barbera, Jost, Nagler, Tucker & Bonneau, 2015; Bakshy, Messing & Adamic, 2015; Karlsen, Steen-Johnsen, Wollebæk & Enjolras, 2017; Bail, Argyle, Brown, Bumpus, Chen, Hunzaker, Lee, Mann, Merhout & Volfovsky, 2018; Muddiman & Stroud, 2017; Vaccari & Valeriani, 2021), intensifying existing contradictions even further because they *sort* existing cleavages and deepen the sense of fundamental differences existing in society (Törnberg, 2022). Therefore, partisanship becomes more encompassing, but ideological positions do not lean towards a more extreme pole.

Affective polarization was first described in the context of US politics, but the concept is now actively used for other democratic regimes (Wagner, 2021; Harteveld, 2021; Nordbrandt, 2021; Bettarelli & Van Haute, 2022). However, sorting as a catalyst for affective polarization has been observed in non-Western contexts (Harteveld, 2021; Huang & Kuo, 2022) as well. In the realm of Russian social media, this phenomenon thrives due to limited (Pashakhin, 2021) media platform diversity. Consequently, users with contrasting political beliefs encounter interpretations of events that challenge their initial political perceptions. They tend to solidify their pre-existing identifications rather than engage in closer examination of their opponents' perspectives on political processes.

Understanding how social media at the disposal of independent politicians helps shape political discourse and frame collective actions in an authoritarian context is of critical importance. First, this is due to the media

system of autocracies, where independent politicians and journalists are expelled from traditional media (primarily national TV) and are forced to look for alternatives. Consequently, they actively exploit social media platforms. Second, the nature of polarization in such regimes is different. It is rooted not in the difference in values that underlie the widespread “left-right” scale, but along the “power-opposition” dimension (Urman, 2019). For a better understanding of polarization and the nature of collective actions within an authoritarian context, the focus on social media should be made because pro-government agents are also present and visible there (Spaiser et al., 2017; Sanovich, Stukal & Tucker, 2018; Orttung & Nelson, 2018; Stukal, Sanovich, Bonneau & Tucker, 2022; Sobolev, 2021).

Reflecting on the phenomenon of affective polarization within authoritarian regimes provides new insights into its nature. Pro-government rhetoric, typically amplified by numerous state-controlled media outlets (Makhortykh, Urman, & Wijermars, 2022), including social media platforms (Gunitsky, 2015), simplifies political reality and fosters opportunities to polarize society by attributing poor economic performance or other problems to Western influences and affiliated actors (Rozenas & Stukal, 2019; Aytac, 2021; Alrababa'h & Blaydes, 2020; Laebens & Öztürk, 2020). Thus, polarization is not a consequence of social divisions but rather a deliberate strategy employed by political actors (McCoy & Somer, 2018).

Furthermore, independent politicians also leverage social media to establish and mold the structure of their communities (Papacharissi, 2015). These communities, such as affective publics, can exacerbate the polarization dynamic, contributing to the proliferation of a more toxic online environment. Consequently, research into the formation of affective communities on social media remains pertinent for gaining a deeper understanding of polarization and political communication within the context of authoritarian regimes.

Contemporary autocracies, which are defined as informational, pay special attention to working with public opinion and framing their power as providing an acceptable level of public services and a decent quality of life (Guriev & Treisman, 2019; Guriev & Treisman, 2022). When possible,

censorship filters unfavorable information for an authoritarian government. However, these control tools are either limited or run into the fear of the autocrat to irritate citizens by blocking platforms that are beginning to play a significant role in their lives. In this regard, social media becomes a crucial source of independent information. On one hand, consumers of such information become more aware of the true state of affairs in the country. By contrast, content makers have the opportunity to earn political capital by increasing their popularity.

Navalny's team produces original content, primarily exposing the corruption schemes the ruling elite exploit to provide themselves and their relatives with a luxurious lifestyle. This, in addition to the topic of limiting political participation and choice that authoritarian authorities practice, is a fruitful soil for the “us *versus* them” opposition and, accordingly, polarization based on the “power-opposition” dimension. Therefore, I formulated a research question regarding the effectiveness of such work in informing citizens.

Research Question 1: *To what extent does Navalny's produced content lead to the formation of a community of users who engage with his content in the long run?*

The literature on political communication in authoritarian regimes shows how sensitive autocrats are to the potential mobilization of their opponents (King, Pan & Roberts, 2013; King, Pan, & Roberts, 2014; Roberts, 2018; Hobbs & Roberts, 2018; Miller, 2022). Most researchers focus on the reactions and strategies of pro-government agents. However, the extent to which the content aimed at mobilizing dissent resonates with potential supporters of the opposition in the long run is not clear. In the case of Russia, researchers record a high level of political apathy among the population (Dollbaum, Semenov & Sirotkina, 2018). In response to this tendency, Navalny's team promotes the idea of ending the monstrous level of inequality and injustice in the treatment of public goods through collective action (protests, voting for independent candidates in elections, and participating in election campaigns as observers on election days).

Sometimes, Navalny's media content or events around him become resonant and are covered by media outlets, including those controlled by the state (although for a long time, state-owned TV ignored Navalny). On Navalny's YouTube channel, there are not only attacks on officials involved in illegal enrichment, the disclosure of their corruption schemes, and attacks on an autocratic leader but also calls for the mobilization of those who disagree with the current status quo. Such topics can increase public interest in Navalny and have the potential to create an affective attunement of those who are dissatisfied with what is happening in the country.

Most of those who encounter Navalny's content for the first time during such periods of high public interest in his personality may demonstrate behavior resembling *connective effervescence* (Ventura et al., 2021). In other words, these commenters can be angry about what is happening, but in the long run, this will not lead to a closer connection to Navalny, such as the formation of parasocial relationships (Rubin, Perse & Powell, 1985; Tsiotsou, 2015) when users actively interact with video content and regularly comment on it (Rihl & Wegener, 2017). Their interaction with Navalny's community will be episodic. Therefore, the following hypothesis is proposed:

Hypothesis 1A: *Engaging with Navalny's content when interest in him is high is less likely to form a long-term relationship with his community on YouTube compared to a period of low interest.*

Commenters participating in discussions on Navalny's YouTube channel represent a conglomerate of different user clusters. It can relate to (1) practices of interacting with video content (ranging from watching videos without active commenting to being a prolific commenter), and (2) political views (from adherents of opposition views to government supporters). The behavior of the latter group - those who criticize Navalny and, thereby, take the ruling elite out of the criticism, can theoretically be justified, on the one hand, by astroturfing campaigns initiated by government actors (Sanovich, 2017; Sanovich, Stukal & Tucker, 2018; Stukal et al., 2022). On the other hand, pro-government positions in discussions can be seen as a manifestation of the *sorting* underlying affective polarization. According to this

line of literature (Barbera et al., 2015; Bakshy, Messing & Adamic, 2015; Karlsen et al., 2017; Bail et al., 2018; Vaccari & Valeriani, 2021), social media facilitates the interaction of users with opposing political positions throwing them into a political war (Törnberg, 2022). This theoretical reasoning undermines an idea about the encompassing nature of echo chambers, filter bubbles, and selective exposure (Stroud, 2007; Pariser, 2011; Guo, Rohde & Wu, 2018; Cinelli, De Francisci Morales, Galeazzi, Quattrociocchi & Starnini, 2021). People on social media and the Internet generally have the opportunity to meet opinions that differ from their own beliefs. Faced with the other side, the convergence of individual positions does not occur, but the thought of deep differences with the other side takes root. Therefore, polarization becomes encompassing.

One of the most remarkable lines of extant literature in the domain of parasocial relationships argues that this kind of relationship can also be negative (Dibble & Rosaen, 2011). In other words, those who dislike Navalny can subscribe to his channel, and parasocial relationships may also appear in this situation. Therefore, discussions may not contain only pro-Navalny (and anti-government) rhetoric. Given my interest in the phenomenon of affective attunement, I expect that anti-opposition rhetoric will follow a pattern similar to Hypothesis 1. When interest in Navalny's personality increases, there will also be relative interest from those ready to express opinions criticizing Russia's most vocal opposition politician. However, this interaction will be sporadic, unlike the periods of less public interest in Navalny when users with more interest in politics and established pro-government views can join the discussions and periodically show up there. Thus, the following hypothesis was formulated:

Hypothesis 1B: *Those who start engaging in discussions expressing anti-opposition cues during a period of high interest in Navalny's personality are less likely to form a long-term relationship with the politician's community, unlike those who start engaging with Navalny's content in a less contentious period.*

Following the logic described in Hypotheses 1A and 1B, I expect that those who express criticism of the government and enter into discussions at a time of increasing interest in Navalny will be less likely to linger on Navalny's channel in the long run. On the contrary, commenters who began interacting with Navalny's content during periods of less interest in his personality will form a community of active users to a greater extent. It is likely that the interest in Navalny among the latter group of commenters is generated by more serious and deep concerns about political processes evolving in Russia, and not by sporadic or hype interest. Thus, I proposed the following hypothesis:

Hypothesis 1C: *Those who start engaging in discussions using anti-government cues during a period of high interest in Navalny are less likely to form a long-term relationship with the politician's community, unlike those who start engaging with Navalny's content in a less contentious period.*

Recent reports on the quality of democratic governance show that there is a tendency for the erosion of democratic institutions worldwide (Repucci & Slipowitz, 2022; Alizada et al., 2022). Illiberal leaders come to power in democratic countries and undermine the established democratic order. Consequently, society polarizes and political discussion becomes more toxic. The authors of the Varieties of Democracy report even define such polarization as “toxic” (Alizada et al., 2022). In this context, incivility, hate speech, and other forms of identity attack in public discussions online are associated with lower expectations about public deliberation and are mediated by the perception of the polarization of society (Hwang, Kim & Huh, 2014). Toxic discussions manifest as one of the traits of affective polarization (Harel, Jameson, & Maoz, 2020). Against this background, the sentiments of conversations in the community of most vocal opposition politicians acting within an authoritarian context are of interest. Thus, I formulated a research question about the tone of discussions in Navalny's community on YouTube.

Research Question 2: *To what extent toxic are the discussions taking place on Navalny's YouTube channel?*

Navalny's actions triggered a notable increase in polarization, particularly when the ruling elite launched repressive and propaganda

campaigns aimed at quelling dissent. This campaign included measures such as the law on foreign agents, stricter regulations governing rallies and other mass gatherings, the classification of Navalny's Anti-Corruption Foundation as an extremist organization, and exerting pressure on social media platforms. Consequently, this situation gave rise to affective polarization, characterized by heightened politicization among activists and supporters, leading to a stark “*us vs. them*” divide fueled by emotions stemming from the existential threat both sides perceive in each other (Dollbaum, Lallouet & Noble, 2021).

My research focuses on discussions within a community that formed around the activities of Alexei Navalny, who positioned himself as the primary challenger to Putin. Existing literature has identified incivility and hate speech as key facets of affective polarization (Harel, Jameson & Maoz, 2020; Stukal, Akhremenko & Petrov, 2022). This polarization is often manifested in incivility, which is linked to reduced expectations regarding the quality of online public discourse (Hwang, Kim, & Huh, 2014). Nevertheless, uncivil interactions among community members can serve a dual purpose by fostering community bonds (Kosmidis & Theocharis, 2020) and strengthening solidarity among individuals who share common political beliefs, particularly in the context of non-democratic political regimes. As Bodrunova et al. (2021) argue, uncivil comments can eliminate barriers to expression for users who might otherwise remain silent, especially in environments where political discourse is discouraged by authorities. Therefore, I examine **Hypothesis 2A** within the context of discussions occurring in Navalny's YouTube community: *Uncivil comments are more likely to start discussion threads than civil ones.*

However, it is crucial to recognize that hate speech and incivility inherently entail disrespect toward others (Kim, Guess, Nyhan & Reifler, 2021), leading to different reactions. For some viewers of Navalny's videos, incivility may facilitate the expression of their opinions, as evidenced by Bodrunova et al. (2021). Conversely, uncivil comments could deter other participants or potential commenters from engaging in conversations. Over time, this has the potential to catalyze a spiral of toxicity (Kim et al., 2021) due to the synchronization of emotions among interlocutors and the effect of social

interaction (Kwon & Gruzd, 2017). Consequently, I investigate **Hypothesis 2B**, which posits that *the longer the time after a video release, the higher the degree of the incivility of comments*.

YouTube in Russia is deeply entwined with politics, fostering communities centered around political bloggers, as noted by Litvinenko (2021). Alexei Navalny serves as a prominent example of this phenomenon, leveraging direct-casting strategies (Bastos, Raimundo & Travitzki, 2013) to become a prominent opposition figure in Russia (Titov, 2017). It is essential to delve into the nature of content produced by his team.

YouTube, as a platform, establishes a medium for affective attunement, allowing individuals to emotionally engage with political matters (Papacharissi, 2014). Affect and emotion have the capacity to transcend existing communities, forming affective publics (Papacharissi, 2014). Navalny's anti-corruption investigations often shocked Internet users, particularly regarding alleged state budget embezzlement. Furthermore, he adeptly united and mobilized various dissatisfied communities, including, for example, truck drivers, state organization employees, and healthcare workers, among others. Navalny managed to connect with diverse audiences, some of whom held contrasting ideals. Without consumers of this content and the affordances provided by YouTube, such as the Trending tab, reaching beyond a niche audience of political enthusiasts would be challenging (Glazunova, 2020). Therefore, I regard the comments section as an affordance (Evans, Pearce, Vitak & Treem, 2016) that enables Navalny's team to promote videos on the YouTube platform, allows his supporters to express their endorsement, and provides a platform for his opponents to voice dissent.

But why do discussions thrive among individuals holding different political beliefs in Navalny's YouTube community? The online environment offers people the freedom to express their views, even when those views are ideologically distant (Shugars & Beauchamp, 2019) or in conflict (Stromer-Galley, 2006). Politically contentious topics often exhibit moderate heterogeneity, meaning diverse sentiments can be observed in comments on sensitive subjects (Röchert, Neubaum, Ross, Brachten & Stieglitz, 2020).

These findings align with the concept of “corrective action,” where individuals who believe that media disproportionately influence public opinion are more inclined to engage in political communication to enhance their visibility (Rojas, 2010). Nevertheless, social media should not be solely viewed as a space for deliberation among different groups; it also serves as a platform for identity formation and reinforcement (Törnberg & Uitermark, 2021). Social media can exacerbate existing divisions by prioritizing identities over opinions, intensifying the perception of profound societal divides and differences between in-group and out-group members (Törnberg, 2022).

Another perspective in the literature suggests that users may respond to social context cues such as likes or the sentiment of comments (Li, Feng, Li & Tan, 2015; Voggeser, Singh & Göritz, 2018; Cho & Kwon, 2015). This situation can also be viewed through the lens of the well-known “spiral of silence” theory (Noelle-Neumann, 1974), in which individuals, seeing that dominant social attitudes propagated by the media or the social environment contradict their own opinions, refrain from expressing their views out of fear of isolation. However, the video format has the potential for much higher engagement than other content types. This storytelling format may attract individuals with apolitical stances and serve as a space for informal political discussions (Coleman & Freelon, 2016). In a sense, it resembles a leisure group (Wojcieszak & Mutz, 2009), involving a diverse audience beyond just opposition-minded users. While apolitical users may not primarily use social media for political news (Möller, van de Velde, Merten & Puschmann, 2019), Navalny's YouTube channel offers not a typical news broadcast but rather political infotainment. This simultaneously engages viewers and creates a more relaxed atmosphere for expressing opinions across different viewer categories.

When YouTube, through features like the Trending tab, contributes to the promotion of video content alongside the media attention Navalny's investigations attract (Kazun, 2019), there's a greater likelihood that users will express thoughts challenging the arguments presented in a particular investigation. This is because such videos can reach beyond Navalny's core supporter base. YouTube also offers a level of pseudonymity that facilitates

expressing dissenting opinions without fear of repercussions, thereby preserving the quality of political discourse (Berg, 2016).

Toepfl (2020) characterizes Navalny's community as a leadership-critical public within a non-democratic context, rallying around a figure unafraid to criticize the country's ruler. I anticipate observing cross-cutting disagreements when attacks on Navalny, his community, or his supporters occur. Cross-cutting disagreement refers to clashes between those criticizing Putin or the authorities on one side and those criticizing Navalny or the opposition in response (and vice versa). Such interactions are expected to take place within the same pair of top-level and threaded comments, rather than exclusively within a single thread.

Hypothesis 3: *Top-level comments attacking Navalny or the opposition are more likely to generate threaded comments from the opposite side than other types of top-level comments (e.g., pro-opposition and neutral stances).*

3.4 Data and Methods

Comments were collected from videos uploaded to the YouTube channel of Alexei Navalny between 2013 and July 2021. The data collection process, based on the YouTube Data Tools service (Rieder, 2015), lasted from November 2020 to July 2021 and covered events such as the poisoning of Navalny and his arrest in January 2021 when he came back to Russia after medical treatment in Berlin. The dataset includes 8,980,313 comments from 407 videos⁵². Information on the period of account registration was obtained through queries sent to the official YouTube API.

Table 6 presents a summary of the statistics for the videos, comments, and commenters. By **top-level comments with a thread**, I mean top-level comments that open a discussion. When other commenters post messages under a top-level comment, **threaded** comments appear. I also discern

⁵² Comments for the video about Putin's palace (<https://www.youtube.com/watch?v=ipAnwilMncI>) were excluded for several steps of analyses because of the improper comments thread structure. The API of the platform did not discern comments into thread and top-level messages. But such an exclusion does not severely affect the representation of discussions.

top-level comments without a thread (they do not open any discussions). This division of comments is relevant only for one type of further analysis: the toxicity of comments. It will allow me to capture the baseline differences between non-political and political channels on Russian YouTube. All the details related to this analysis are presented in a separate subsection.

Table 6. Summary statistics of comments on Navalny's YouTube channel

Data item	Number of observations
Comments	8,980,313 (7,985,548* for some tests)
Commenters	1,858,544 (1,570,657* for some tests)
Top-level comments without a thread*	5,387,019
Top-level comments with a thread*	579,556
Thread comments*	2,018,973
Videos	407

*Note: * - for the dataset without a video about Putin's Palace, because API returns an error for the structure of a comments thread (no distinction into top-level and thread comment)*

Structural topic modeling of comments. To present a general overview of topics raised by commenters in their posts, I started my empirical analysis with structural topic modeling (STM) (Roberts, Stewart & Tingley, 2019) of the discussions in the comments section of Navalny's YouTube channel. This method allows an analyst to explore (1) how word co-occurrences (or topics) are distributed across documents (YouTube comments in this case), (2) the correlation of the topics with some covariates of research interest, and (3) the prevalence of topics at different levels of a covariate. I included one covariate in my structural topic model: a type of comment (whether it is a top-level comment (1) with or (2) without a thread or (3) a thread comment).

To create a representative sample that would be tractable with available computing capacities, I extracted a 10% random sample clustered on video

level and comment type. This resulted in 700,242 comments, which decreased to 695,405 comments after pre-processing (lemmatization, deleting stopwords, punctuation, and removal of numbers and words with fewer than three characters). Words that appeared in less than one percent of the comments were also excluded. Although the extant literature suggests removing words that are common for more than 99 percent of documents in the corpus (Hopkins & King, 2010; Grimmer & Stewart, 2013; Maier, Niekler, Wiedemann & Stoltenberg, 2020), I did not do so because otherwise, the commonalities in topics are almost not discernable.

Choosing the right number of topics, or k , is crucial in topic modeling as it directly impacts the quality and interpretability of the results. Statistically driven ways to identify the number of topics in topic modeling augment the close reading of representative documents by researchers and provide some orientation for human interpretation (Grimmer & Stewart, 2013; Grimmer, Stewart & Roberts, 2022). Therefore, two methods were used to select the number of topics. Briefly, these methods are different approaches to determining the appropriate number of topics in topic modeling. They focus on various statistical measures and algorithms to analyze the topics' characteristics and their relationships to find the most suitable number of topics for a given text corpus. The first method is based on spectral initialization (Mimno & Lee, 2014), which defined 61 topics as an orientation for further modeling. The second method relies on metrics such as *Arun2010*, *CaoJuan2009*, *Deveaud2014*, and *Griffiths2004*⁵³ from the R package *LDA tuning* (Murzintcev & Chaney, 2020). To employ this approach, I ran the LDA tuning algorithm for an assumed number of topics ranging from 2 to 100. I found the extremum for the corresponding pairs: *minimization* (*Arun2010* and *CaoJuan2009*) and *maximization* (*Deveaud2014* and *Griffiths2004*). The results

⁵³ *CaoJuan2009* is named after an article where a group of authors suggested finding a minimum of the average cosine distance of topics (Cao et al. 2009) to define topics' number choice. *Deveaud2014*, as a metric, deals with information divergence between all pairs of LDA topics and maximizes it (Deveaud, SanJuan, and Bellot 2014). *Arun2010* aims to find the minimum in the symmetric Kullback-Leibler divergence of values in topic-word and document-topic matrices outputs of LDA (Arun et al. 2010). *Griffiths2004* used the Markov chain Monte Carlo algorithm and found the maximum log-likelihood of word occurrence to define a k number of topics to be used in the analysis (Griffiths and Steyvers 2004).

are presented in Figure [E1](#) of the appendix [E](#). The optimal number of topics ranged between 60 and 70. Thus, I used 61 topics derived after the use of spectral initialization (Mimno & Lee, 2014) because this number of topics corresponds to the range identified by LDAtuning metrics.

Composition of commenters and retention analysis. The question of how much and when Navalny's YouTube channel creates not just a “feeling of community” (Dean, 2010), but the community itself, should first be considered from the standpoint of how often users enter into a discussion. As was reported in the literature, clustering users by types of activities provides a more granular understanding of online participation (Zelenkauskaitė & Balduccini, 2017). Following this principle, I segment YouTube commenters into two groups: one-offs (i.e., those who write a comment only once and do not contribute to the discussion anymore) and prolific commenters (those who comment more than once). Such a threshold (whether a commenter wrote more than one comment in his history of interaction with Navalny's content) allows, albeit partially, to reveal the nature of online participation in the community: to what extent it is sporadic or, conversely, systemic.

Then, to address Research Question 1 and test the related hypotheses 1A, 1B, and 1C, I used cohort analysis. Specifically, I compared the behavioral patterns of commenters who started to engage with Navalny's content on YouTube during different periods of public interest. Interest in Navalny and his activities was measured using Wikipedia data on views of the Russian-language page dedicated to the politician. The time of increased interest includes periods when Navalny's page was visited above the average monthly value, equal to 147,549 (See Figure [7](#)). I present the aggregate number for all the agents who visited the page, not just ordinary users. These agents may include bots, crawlers, and third-party services. Appendix [E](#) also provides a similar graph for visits to Navalny's page by real users (average monthly visits are 142,865; see Figure [E1](#)) and interest in Navalny according to Google Trends (see Figure [E2](#)). Both graphs repeat the trends reflected in the chart for all agents (Figure [7](#)).

I chose the average monthly view instead of the median for the following reasons. For the average values (or the mean), well-known concerns exist regarding the sensitivity of the metric to outliers. However, I am interested in the phenomenon of affective attunement when emotions start to go off the scale, and many people have a real interest in who Navalny is and what he does. Therefore, the higher bar given by the average (147,549 versus 74,231, which is the median monthly view) helps to cut off many periods when the hype around Navalny was not sharp or did not exist at all. During periods of high interest in Navalny, 101 videos were published, whereas 306 videos were published on ordinary days.

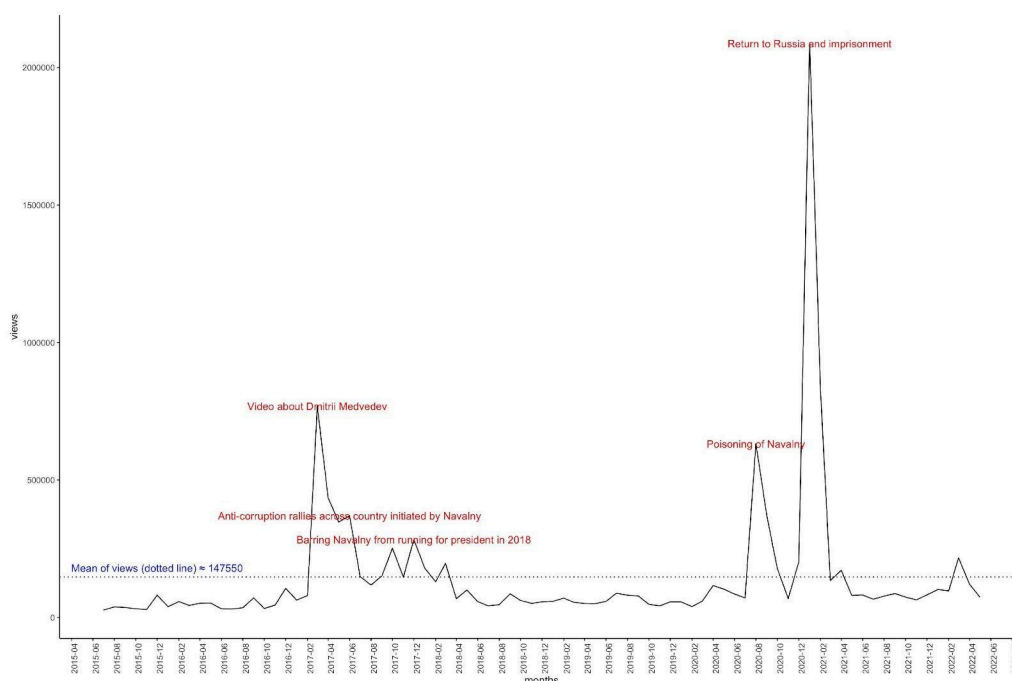


Figure 7. Interest in Navalny according to visits to his Wikipedia page in Russian, all agents (i.e., data that encompasses all sources of traffic, not differentiating between human users, bots, or other types of agents⁵⁴).

After detecting the periods when interest in Navalny was above average, users were segmented into those who commented on the video at the time of such a spike of interest in Navalny's activities and those who began to

⁵⁴ For technical distinctions, the documentation of Wikimedia API: https://wikimedia.org/api/rest_v1/#/Pageviews%20data

discuss regular days. Returning to Research Question 1, I recall that my interest lies in the formation of a community around Navalny's YouTube channel. YouTube's API, expectedly, does not provide data on which users are watching Navalny's videos or when they first started doing so. By community, I mean a narrower layer of users - those who comment on the video - because the interaction of a particular user with the video is recorded precisely by posting a comment. That said, I acknowledge that the community may also include those who regularly watch the videos produced by Navalny's team but choose not to engage in discussions in the comment section. However, the lack of relevant data dictates the need to slice my attention's scope to commenters.

For the cohorts, I selected only commenters who first began to interact with the video within a week of the video release. Videos, in turn, were grouped separately into those that were published during the period of high and low interest in Navalny. I took a period within a week after the video release rather than the exact day of publication because in this case, I could capture the effect of the public discussion of Navalny's investigations or the events around him. In other words, people who were not familiar with Navalny's activities could come to his channel to become acquainted with the video, not immediately after its release, but with some time lag.

The next step in the implementation of cohort analysis is to determine the temporal period for which I evaluate the retention of commenters on Alexei Navalny's YouTube channel. I limited the period to 15 months. This period expresses long-term interest in the content produced by Navalny's team. Retention was reviewed monthly by a commenter after the first entry into the discussion. I look at the period when the comment was left and not the sequence in which the video was released on Navalny's channel. For instance, those who commented on the release of a film about former Russian Prime Minister Dmitry Medvedev (March 2017) can leave other comments the following month (April 2017) but under a video that came out earlier (February 2017). In this way, I assume that a community is formed when users return to old records and do not simply follow new releases of anti-corruption investigations.

In the Appendix [E](#), I also replicate the retention analysis with a focus on 15 months, based on the event of commenting itself and not followed consecutively in calendar order (Figures [F3](#), [F4](#), and [F5](#)). For the sake of clarification, cohort members may become silent the month after a video is released because no videos were released that month. However, they may return later when the activity on the channel, in terms of releasing new investigations, resumes. When we observe such a situation, earlier periods of Navalny's presence on YouTube contain more uncertainty. Therefore, this factor of interruption in the production of content by the Navalny team must also be considered.

To assess the differences between groups of users involved in discussions at different periods of interest in Navalny, I used 95 percent confidence intervals obtained using bootstrap with replacement. Owing to the relatively small number of videos from each of the considered periods, 100,000 samples were used.

To test Hypotheses 1B and 1C, I exploit a keyword-based approach to focus on users who start their engagement with Navalny's YouTube channel using pro-government and pro-opposition cues. I checked whether a comment contained any words with derogatory references to the government or opposition. This procedure does not imply counting the overall number of words in a comment, which is necessary for scaling the commenters' positions between two extremes in the “government-opposition” continuum. Instead, I detected the presence of pro-government or pro-opposition cues because such a focus on insults towards the other side is dictated by fitting to the idea of affective polarization driven by emotions rather than policy preferences. This task is accompanied by the challenge of correctly choosing words that capture as many instances of politically colored speech as possible. To address this issue, I followed the approach of iterated computer-assisted keyword selection suggested by King, Lam & Roberts (2017). First, I began with several derogatory words targeting Putin and Navalny. This step cuts out many shades of disagreement (especially those made in a less uncivil manner), but its advantage is that I can downsize the risk of detecting false positives.

Derogatory references to Putin and Navalny were detected after a close reading of YouTube comments and pages on Lurkmore, which serves as an encyclopedia of political discourse on the Russian Internet (Table [G1](#) in Appendix [G](#)). Then, I widen the scope of keywords in a snowball sampling manner, checking the sentiment of comments towards both the government and the opposition, either randomly reading some of them (when their number is huge) or the whole subset of comments with a particular word.

It is hardly possible to be completely sure of the correctness of this classification into oppositional and pro-government categories relying only on keywords. For instance, commenters may use their opponents' cues as a tongue-in-cheek trick to mock the opposite side. In addition, although I checked as many distortions and obfuscations as possible, the list of derogatory references is not all-encompassing because commenters are very creative in name-calling and intentional distortion of words that have been included in the dictionary. Simply reading individual comments chosen randomly from the entire corpus does not reveal all possible obfuscations and intentional changes in major name-calling. Thus, there is inevitably some level of uncertainty in the classification of comments as pro-government or pro-opposition. To address this issue, I follow the same procedure of bootstrapping described earlier, but with a focus on those who commented on Navalny's YouTube channel using pro-government and pro-opposition cues. Bootstrapping allows me to add this uncertainty to the estimates with relevant confidence intervals.

Comments containing keywords from both dictionaries - pro-government and oppositional – were excluded from the corpus for cohort analysis. Further details on the distinction between pro-government and oppositional discourses can be found in Appendix [G](#).

Comments' toxicity. To address Research Question 2, I used the toxicity scores provided by Google Perspective API⁵⁵. Developers define toxicity as “a rude, disrespectful, or unreasonable comment that is likely to

⁵⁵ I use an R wrapper provided by (Votta, 2019).

make people leave a discussion”⁵⁶. Perspective API detects incivility in short texts written in several languages, including Russian⁵⁷. The service was used to detect toxicity in short comments in Russian-language online communities and services (Bogoradnikova et al. 2021) as a baseline for comparison, and outperformed many other methods checked by the authors.

The service offers several toxicity attributes (identity attack, insult, profanity, threat, etc.). I did not replace toxicity scores with other Perspective API attributes because the correlation between them in different comment samples was strong enough (from 0.8 and higher). Thus, I worked only with the flagship attribute of Perspective API, a general measure of toxicity. Table [H1](#) in Appendix [H](#) contains examples of comments, their translations in English, and toxicity scores.

The estimate of toxicity in Navalny's YouTube channel comment section, without comparison, does not substantively tell us anything about incivility. Therefore, it is necessary to find a community comparable to Navalny's YouTube channel in terms of audience characteristics (Navalny's team can gather different segments of Russian society but predominantly a younger audience). The Russian analog of The Late Show with Stephen Colbert called the Evening Urgant (the number of subscribers on YouTube is 6.36 million, almost like Navalny's channel - 6.43 million by winter 2022) was chosen. However, I eventually found that Urgant's YouTube channel was no longer available. After the start of Russia's full-scale invasion of Ukraine, the YouTube administration removed it because it was associated with Channel One, a TV channel sponsored by the Russian government. Therefore, the content of the YouTube channel is not available, but the information from the YouTube API can still be retrieved (general statistics on the channel, such as views, number of comments, likes, and comments). Since I started data collection on an apolitical celebrity channel in 2022 (before February 24th) and the channel was banned, the discussions that occurred in this community do not

⁵⁶ About the API, at <https://developers.perspectiveapi.com/s/about-the-api>, accessed 2 November 2022

⁵⁷ Frequently Asked Questions, at <https://developers.perspectiveapi.com/s/about-the-api-faqs>, accessed 2 November 2022

reflect the latest events related to the Russian-Ukrainian conflict. Otherwise, the level of toxicity could have been much higher.

Method for testing Hypothesis 2A. Testing Hypothesis 2A involves examining the link between the toxicity of a top-level comment and its propensity to initiate a discussion thread. I employed logistic regression, using a dependent variable to signify whether a top-level comment triggers a thread or not. Unfortunately, due to limitations in the dataset derived from the YouTube API, I was unable to analyze sub-threads when users responded to comments within a thread. Therefore, I categorized all such comments as part of a thread in response to a single top-level comment. As the primary independent variable, I used a dichotomized version of the toxicity score, classifying comments with a score equal to or greater than 0.5 as toxic, while those with a score below 0.5 were considered non-toxic. Additionally, I explored an alternative approach employing local polynomial fits to predict the number of replies a top-level comment received, factoring in Perspective's raw toxicity scores. I also conducted ordinary least squares (OLS) regression to examine the relationship between the length of discussion threads and the toxicity of top-level comments (refer to Table A4).

Method for testing Hypothesis 2B. To assess Hypothesis 2B, I investigated the association between a comment's toxicity and the timing of its posting, categorizing time intervals into 2-hour and 12-hour bins after the video's publication. This analysis focused on calculating the average toxicity values for three comment types within each time interval, with error bars representing 1.96 standard deviations from the mean. Furthermore, I conducted a regression analysis to explore the relationship between toxicity and the timing of comment posting (see Tables [H5](#) and [H6](#) in the appendix [H](#)).

Additionally, I ran OLS regressions to investigate the timing of comment posting within 2- and 12-hour intervals, considering factors such as (1) the frequency of interaction with Navalny's content (distinguishing between one-off and prolific commenters), (2) the average toxicity level of their comments (defining commenters as “toxic” if their average toxicity score exceeded 0.5, and “non-toxic” otherwise), and (3) the type of comment.

Interactions between these variables were also examined (see Tables [H7](#) and [H8](#) in the appendix [H](#)).

Discerning anti-/pro-government stances. To explore Hypothesis 3, I employed class affinity modeling (Perry & Benoit, 2017) to identify pro-government and pro-opposition sentiments in comments. This method is suitable when most text messages lack labels, but a limited number of comments exhibit extreme values on an ideological spectrum. I initially constructed a dictionary containing derogatory references to the government and opposition, focusing on insults targeting the opposing side, a hallmark of affective polarization driven by emotions and manifested in hate speech. The dictionary creation algorithm was based on a computer-assisted keyword selection approach suggested by King, Lam & Roberts (2017), as previously mentioned.

I then identified YouTube comments that met two criteria: (1) they contained derogatory references to the government/opposition and (2) their scores exceeded 0.5 according to the Perspective API toxicity classifier. The threshold of 0.5 was chosen due to the probabilistic nature of the toxicity classifier, delineating comments from civil to uncivil categories. Comments containing both pro-government and opposition words were excluded from the training set. This training set, comprising politically charged comments exhibiting uncivil sentiment, served as the basis for a class affinity model. Most of the words in the dictionary were found to be non-toxic according to the Perspective API classifier, and there was a weakly positive correlation (0.12) between toxicity and affinity scores.

Class affinity scores ranged from 0 to 1, with pro-government and pro-opposition comments defined as having affinity scores of 0.2 or less (pro-government) and 0.8 or more (pro-opposition). These thresholds were chosen to capture extreme forms of attacks on the opposing side. The training set comprised 194,674 comments, representing 2 percent of the entire corpus. Recall that the class affinity model allows an analyst to work with a small number of labeled documents (Perry & Benoit, 2017). This class affinity model was then applied to the entire corpus of approximately 8 million comments,

resulting in sentiment distribution, which can be found in Table [11](#) in the appendix [I](#).

It is important to note that this approach differs from conventional supervised machine learning methods, where coders annotate a sample of text to train classification models. My method, involving the combination of Perspective API toxicity scores, resembles a form of supervision with the found data (Grimmer, Stewart & Roberts, 2022), demanding significant validation efforts. I have already mentioned how the results of computer-assisted keywords used to identify pro-government and opposition cues were validated by a close reading of such comments. Regarding the relevance of Perspective API toxicity classifier for the Russian language, I have already speculated in the corresponding section on the analysis of the toxicity of the discussions.

The results of class affinity modeling were further validated through comparisons with two independent coders who manually categorized 1000 comments into pro-government, pro-opposition, and neutral categories, considering factors like attacks on the opposing side, message incivility, and emotional expressions (e.g., emojis) by commenters. Inter-coder reliability was high at 0.89, and the model demonstrated robust prediction accuracy, with a score of 0.97 with the first coder and 0.95 with the second coder. However, it is important to note that precision metrics for pro-government positions were relatively lower (0.71 for coder 1 and 0.73 for coder 2), likely due to the limited presence of pro-government and pro-opposition comments (Table [11](#) in the appendix [I](#)). Therefore, the results of class affinity modeling should be interpreted cautiously, considering the specific nature of the comments requiring discernment. Additional statistics can be found in Tables [12](#) and [13](#) while annotation instructions are in the appendix [I](#).

Method for testing Hypothesis 3. To test Hypothesis 3, which examines the connection between attacks on Navalny or the opposition and subsequent responses from their supporters, I constructed a discussion type scale and employed multinomial logistic regression. The dependent variables encompass five distinct categories: (1) *absence of conversation*, indicating that a top-level

comment lacks any replies, (2) *discussion*, signifying a scenario in which a top-level comment spawns a thread of reply comments but lacks attacks on the government or opposition, (3) *attack on the government*, denoting a top-level comment with a reply comment containing an attack on the government, (4) *attack on the opposition*, indicating a top-level comment with a reply comment containing an attack on the opposition, and (5) simultaneous attacks from both sides within a threaded comment, where a top-level comment incites reactions from both political factions. For a detailed breakdown of the distribution of discussion types, refer to Table [I4](#) in the appendix [I](#).

The focal independent variable in this study pertains to the type of comments, which can be categorized into three distinct values: pro-government, neutral, and pro-opposition. Additionally, I exercised control over several other variables, including the length of a comment, the quantity of likes it garnered, the time of posting (segmented into 2-hour intervals following the video's release), and whether a comment is toxic. To address the skewed distribution of both comment length and the number of likes, I employed logged versions ($\log(I+x)$) of these variables rather than their raw values.

Further analyses were conducted using ordinal logistic regression, which was divided into two distinct models. These models were applied to a dependent variable featuring three levels: no discussion, discussion, and either an attack on the government or opposition, depending on the specific model (refer to Tables [I7](#) and [I8](#)). However, it is important to note that these modifications were not incorporated into the main text of the dissertation due to their non-compliance with the assumption of proportional odds. Additionally, I assessed the outcomes using multinomial logistic regression models, which do not assume an ordered relationship for the dependent variable. This analysis involved two separate models, as indicated in Tables [I5](#) and [I6](#).

3.5 Results

I start with providing a general overview of the comment dataset. Figure 8 illustrates the monthly fluctuations in the number of comments throughout the study period, highlighting the uneven distribution of commenting activity over time. In summary, a mere one percent of the most discussed videos (amounting to 4 videos) accounted for a staggering 23 percent of the total comments, totaling 2,078,519 comments. Meanwhile, ten percent of the videos (41 in total) were responsible for half of all the comments, tallying up to 4,531,856 comments. This distribution pattern is reflected in a Gini coefficient of 0.67, signifying a significant concentration of comments emanating from a limited set of videos. A Gini coefficient nearing one suggests that the comments are highly concentrated in just a few videos (with all comments clustering under a single video when the coefficient equals one). Conversely, when the Gini coefficient reaches zero, it implies that comments are evenly distributed across all videos released by Navalny's team.

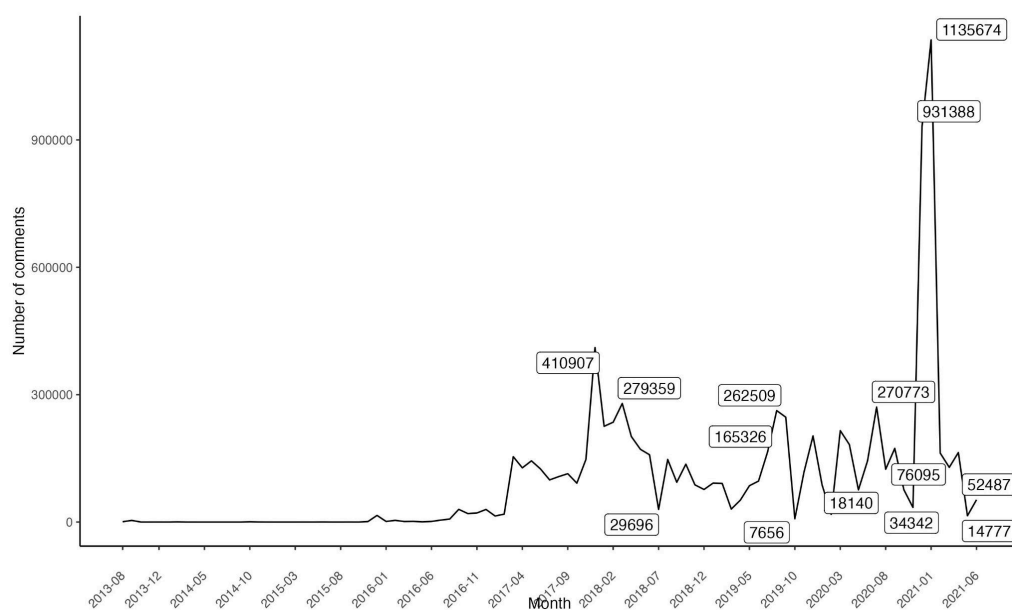


Figure 8: Number of comments on Navalny's YouTube channel by month of publishing.

Comments are not merely sporadic emotional bursts confined to composing a single message and then departing from the page. Instead, as

depicted in Figure 9, videos foster ongoing dialogues among users. This notion finds confirmation in the Gini coefficient, which measures the inequality in how comments are distributed among YouTube users. The interpretation of these coefficients aligns with what we previously discussed concerning the Gini coefficients for videos and comments. However, in this context, I am examining the distribution of comments among users rather than videos.

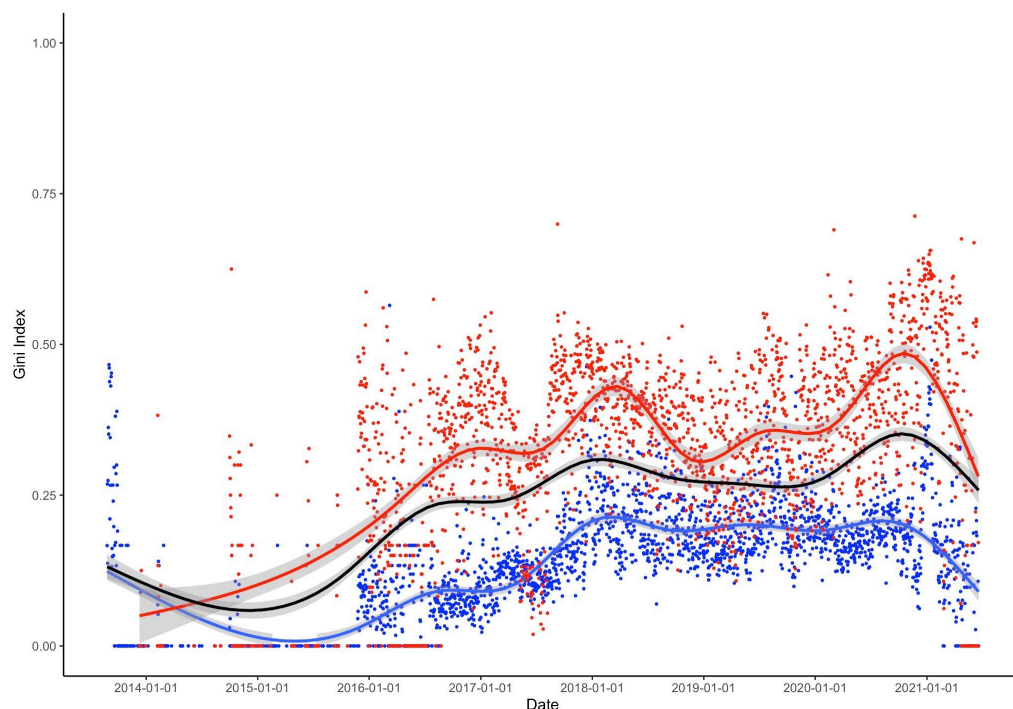


Figure 9: Inequality in the distribution of comments by YouTube users, a day-level snapshot: the red line and dots are for thread comments, the blue line and dots are for top-level comments, and the black line is for the whole corpus of comments, with 95% confidence intervals.

As shown in Figure 9, the Gini index for threaded comments (indicated by the red line) surpasses that of top-level comments (represented by the blue line). This disparity implies that Navalny's YouTube channel videos gave rise to micro-discussions marked by active exchanges of opinions under the top-level comments. Here, some users respond to the statements made by others, with varying degrees of engagement in these conversations. In contrast, top-level comments primarily reflect commenters' reactions to the content of

the video clips rather than extensive exchanges of opinions with their peers, resulting in a lower level of inequality in the distribution of this comment type.

The first research question that frames this chapter is to what extent Navalny's content leads to the formation of a community of users who engage with his content through commenting in the long run. To answer this, I start with a description of the discussions evolving in the comments section on Navalny's YouTube channel. In Table 7, I summarize the most frequent words translated into English for the 10 topics with the highest share in the corpus. The summary of the topics was labeled after reading the representative comments. Table F1 and Figure F2 contain the list of all topics with the 7 most statistically frequent words in English and Russian.

Except for expected topics related to praising Navalny in different forms⁵⁸ and sending curses to the political elite⁵⁹, users consider commenting as a way to participate in politics online (Topics 2, 3, 12, 51, see Table 7), in addition to more traditional offline modes to express discontent with the current state of affairs⁶⁰. Overall, messages appealing to others to widely share information from Navalny's videos constitute more than 10% of comments.

As can be seen from the STM results, commenters consider promoting videos on YouTube (in particular, through the list of trending videos⁶¹) as a form of informing others about how the existing political regime contradicts their interests and why to take an active part in collective actions. Below, a translation of several comments containing the highest score for Topic 2 (Discussion a video) is presented.

⁵⁸ Topics 5, 41, 50: *'свободу Алексею Навальному!'* ('Freedom for Alexei Navalny')

⁵⁹ Topics 9, 16: *'я думал в россии больше нечего воровать, а оказывается есть. и надо всех сажать кто в думе сидит. сколько они могут там сидеть'* (I thought there was nothing more to steal in Russia, but it turns out there is. And it is necessary to jail everyone who is sitting in Parliament. How long can they sit there?)

⁶⁰ Topic 11: *'люди, долго вы будете это все терпеть?! восстаньте! захватите власть, свергните всех власти-принадлежащих людей, всех коррупционеров, лжецов, прохиндеев. пусть в россии будет хорошо без них и даже лучше! свергнуть власть!'* (People, how long will you endure this? Rise! Seize power, overthrow all people in power, all corrupt officials, liars, and swindlers. Let it be good in Russia without them and even better! Overthrow the government!)

⁶¹ The trending tab displays the most relevant videos for the audience in a country, it is the same for all users from a particular country.

- *"пишем больше длинных комментариев и репостим для вывода в топ!!!" ("Let's write more lengthy comments and repost to get to the top [of the Trending tab on YouTube]!!!").*
- *"у меня не отобразилось данное видео в уведомлениях! в ответку напишу 10 комментов для лучшего продвижения ролика. 10 и так будет с каждым" ("I didn't see this video in my notifications! As a response, I will write 10 comments for better promotion of the video. 10 and so it will be with everyone").*
- *"подписал петиции, поделился видео. написал комментарий, поставил лайк. в трееееенды!!!" ("[You] signed the petition, [You] shared the video. [You] commented, [You] liked. To the treeeeends [of YouTube]!!!").*

Table 7. Summary of STM with k=61 for comments, top 10 topics

Topic	Summary of topic	7 top words	Share
5	Freedom for Navalny	Navalny, freedom, free, release, political, reality, estimate	5%
3	Promotion of video	top, keep, hooray, fire, go up, let's go, maintaining	4%
16	Corruption among elites	Putin, stay (in jail), thief, official, jail, regular, member of parliament	3%
12	Trending the video	trend, comment, show, raise, bring (to the top), send, promote	3%
41	Save Navalny	help, fear, hope, God, family, open, idiot	2%
11	Revolution	people, revolution, endure, come, enemy, organize, change	2%
51	Convince others	tell, film, win, politics, together, strongly, opposition	2%
9	State propagandists	watch, begin, real, Internet, listen, Soloviev, shock	2%

2	Discussing a video	video, video clip, write, read, conclusion, delete, destiny	2%
50	Praising Navalny's activity	investigation, wait, shoot (video), bravo, close, super, awesome	2%

3.5.1 Identity of commenters

Before considering the question of how long-term user interaction with Navalny's content is, I first look at which videos published on his YouTube channel attracted new users the most. Table 8 presents the top ten videos that attracted the highest overall number of new commenters. Five of them relate to the events of 2020-2021 after the poisoning of Navalny with Novichok - investigations of Putin's Palace, a conversation with a member of a group responsible for poisoning Navalny, the disclosure of this network's activities, and a speech delivered by Navalny in court after returning to Russia from Germany, where he was treated for poisoning. This table reflects the general public's interest in Navalny and his investigations based on the statistics of views of a Russian-language Wikipedia page dedicated to him (see Figures 7, E1, and E2). Spark of page views occurs during the most resonant events - the release of the investigation about Prime Minister Dmitry Medvedev (March 2017), the poisoning of Navalny with Novichok (summer 2020), the revelation of the network responsible for the organization of the poisoning, and the publication of the film about Putin's palace near the city of Gelendzik (January 2021).

Table 8. Videos with the highest overall number of new commenters

<i>Clickable</i> video title (year of release)	Number of New commenters	Share of new commenters
Palace for Putin. History of the biggest bribe (2021)	491,200	0.59

I know everyone who tried to kill me (2020)	225,966	117,811	0.52
I called my killer. He admitted (2020)	250,253	108,906	0.44
Results of the 'voting'. What to do next? (2020)	60,517	27,528	0.45
The golden palace of your favorite doctor (2020)	58,363	24,812	0.43
Reply to General Zolotov (2018)	65,082	24,781	0.38
Speech by Alexei Navalny in court on January 28 (2021)	54,349	23,867	0.44
Don't call him Dimon (2017)	73,816	23,429	0.32
Chaika (2015)	20,152	19,479	0.97
The secret life of a foreign agent (2019)	55,702	18,927	0.34

Table 9 presents the top ten videos with the highest share of newcomers in the discussion. The video on Prosecutor General Yuri Chaika was Navalny's first anti-corruption investigation to be posted on YouTube and attracted the most newcomers from the total number of video commenters. Putin's answer to the question about Chaika (a video related to this story) is in the third position. Between these two videos is Navalny's appeal to truckers to continue their strikes against the introduction of the Platon toll system for trucks on federal highways. Thus, videos with the largest share of new commenters were released when YouTube was just beginning to be mastered by independent activists and journalists (2015-2016).

Table 9. Videos with the highest share of new commenters

<i>Clickable</i> video title (year of release)	Number of commenters	New commenters	Share of newcomers
Chaika (2015)	20,152	19,479	0.97
Alexei Navalny's address to truckers (2015)	1,395	1,314	0.94
Putin's answer to the question about Chaika (2015)	11,648	9,517	0.82

Dmitry Medvedev's secret dacha (2016)	10,797	8,550	0.79
Dogs of Deputy Prime Minister Shuvalov fly on a private jet (2016)	3,907	3,037	0.78
How Vladimir Putin transferred \$1.75 billion to his son-in-law (2016)	1,462	1,074	0.73
A few words about Sokolovsky (2016)	2,788	2,021	0.72
Who finances Navalny (2016)	8,482	6,030	0.71
Cossacks vs Pokemon (2016)	1,293	866	0.67
The authorities' fantastic reaction to Medvedev's palaces and yachts (2017)	15,597	10,386	0.67

One-off vs Prolific commenters

Commenters comprise a heterogeneous set that includes users who occasionally enter conversations and actively participate in ongoing discussions. What is the ratio of both groups to the whole set of commenters on Navalny's YouTube videos? When do different types of users post comments? Specifically, I focus on the division of the time range under scrutiny into periods of high and low interest in Navalny.

First, the total number of one-off commenters prevails over those actively involved in the discussions. However, the latter group contributed eight times more to the production of comments (8,013,733 versus 966,580 comments, Figure [10](#)).

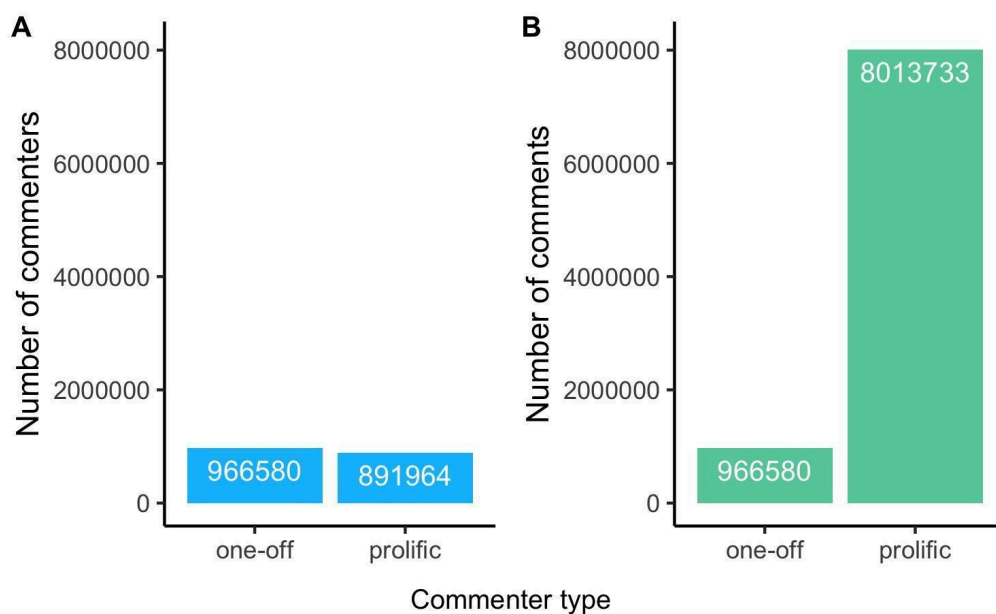


Figure 10. Number of (A) commenters and (B) comments left by one-off and prolific commenters.

Second, most of the one-off commenters appeared in Navalny's community when there was high interest in his activity (503,072 against 304,324) (Table 10). Third, during a period of high interest in Navalny, prolific commenters posted messages on Navalny's videos slightly less than during a period of low interest (Table 11).

I consider only those comments posted within a week of the video release. Videos, in turn, were grouped separately into those that were published during the period of high and low interest in Navalny. Therefore, the number of comments is less than that in Figure 10. I took a period within a week after the video release rather than the exact day of publication because in this case, I could capture the effect of the public discussion of Navalny's investigations or the events around him. In other words, people who were not familiar with Navalny's activities could come to his channel to become acquainted with the video, not immediately after its release, but with some time lag. When subsetting the comments corpus is based on the same day of the video release

and posting of the comment, such a delayed reaction will not be fully captured⁶².

Table 10. Number of comments left by one-off and prolific commenters in the period of high and low interest in Navalny, within a week after a video release

	by one-off commenters	by prolific commenters
High Interest in Navalny	503,072	3,307,696
Low Interest in Navalny	304,032	3,854,308

Table 11. Number of prolific commenters and comments they posted depending on the period of interest in Navalny, within a week after a video release

	High Interest in Navalny	Low Interest in Navalny
Commenters	365,487	379,126
Comments	3,307,696	3,854,308

Testing Hypothesis 1A: *Engaging with Navalny's content when interest in him is high is less likely to form a long-term relationship with his community on YouTube compared to a period of low interest.*

After presenting more general patterns of user-video interactions, I move on to test Hypothesis 1A, which tests how the level of public interest in Navalny's activities is associated with the subsequent retention of commenters in Russia's opposition leader's YouTube community.

Figure [11](#) shows an extremely low level of commenter retention over a 15-month period. The share drops to about two percent in the second month, and in subsequent months, it goes even less than one percent (an average of 0.3 percent for periods of high interest in Navalny and 0.6 percent when this interest was less than average, see Table [F4](#) and [F5](#)). Figure [12](#) shows a zoomed view of these dynamics. However, it is worth noting that such a low percentage of retention may be due to the approach to determining the

⁶² In the Appendix (Tables [F2](#) and [F3](#)), information on the distribution of comments and commenters based on a video, without taking into account the month when a comment was posted, is also presented. In general, the trend described in Tables [10](#) and [11](#) is also observed in this case.

sequence of comments - the emphasis on the calendar sequence. In the Appendix [E](#), one can find a similar chart, but here the 15 months are taken not through calendar countdowns of the days after the first interaction with the content but through the emphasis on 15 months of commenting as such (Tables [F10](#) and [F11](#)). In this case, 15 months can represent a much larger time range because Navalny's team can take a break in video production. This was typical, for example, for 2013-2015, when videos were released less often. Therefore, it also makes sense to look at Figure [F3](#) in the Appendix [E](#).

Generally, in the first few months after entering the discussion, those who did this in the period of high interest in Navalny were more active than users from the low-interest group (Figures [11](#), [12](#), and [F3](#)). However, representatives of the latter group remained in the community for a longer time. At the 15-month level, when the focus was on the act of commenting rather than the calendar sequence, retention for the group of commenters who came during a period of high interest in Navalny was 4.6 percent (95 percent bootstrapped confidence interval varied from 4.1 to 5.2 percent; see Table [F10](#) for more details). The second group had a retention of 9 percent (95 percent bootstrapped confidence interval is between 8.1 and 10.1 percent, more in Table [F11](#)).

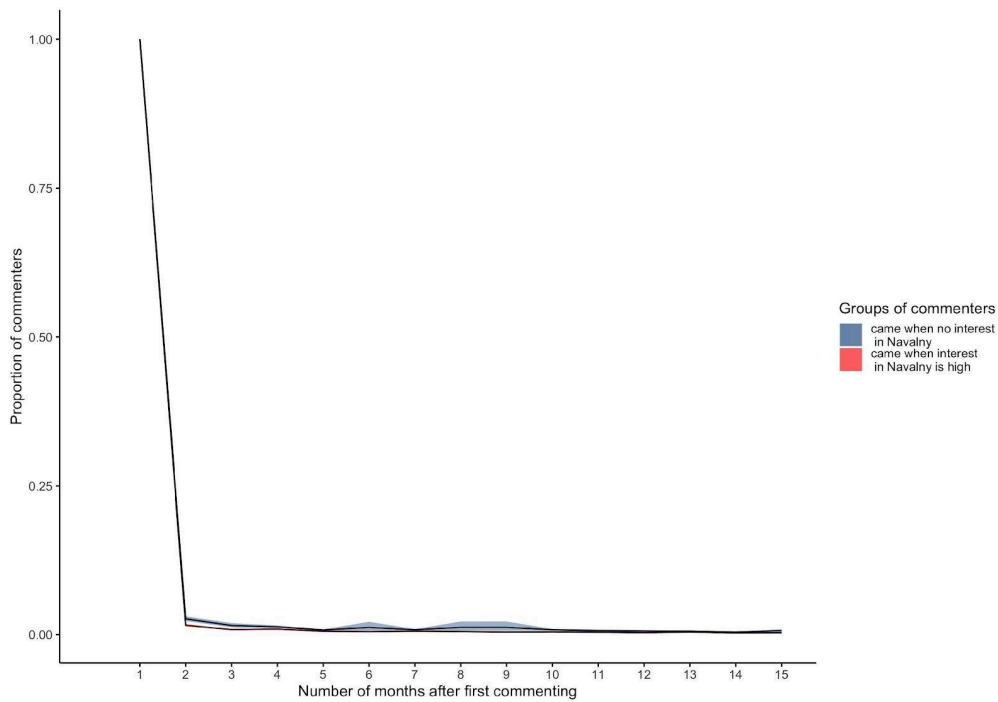


Figure 11. Retention of two commenters' types after the video release (in months after release), with bootstrapped 95% confidence intervals.

Thus, observations from both versions of retention analysis for the whole conglomerate of commenters confirm the hypothesized relationship. Engaging with Navalny's content when interest in him is high is less likely to form a long-term relationship with his community on YouTube compared to a period of low interest.

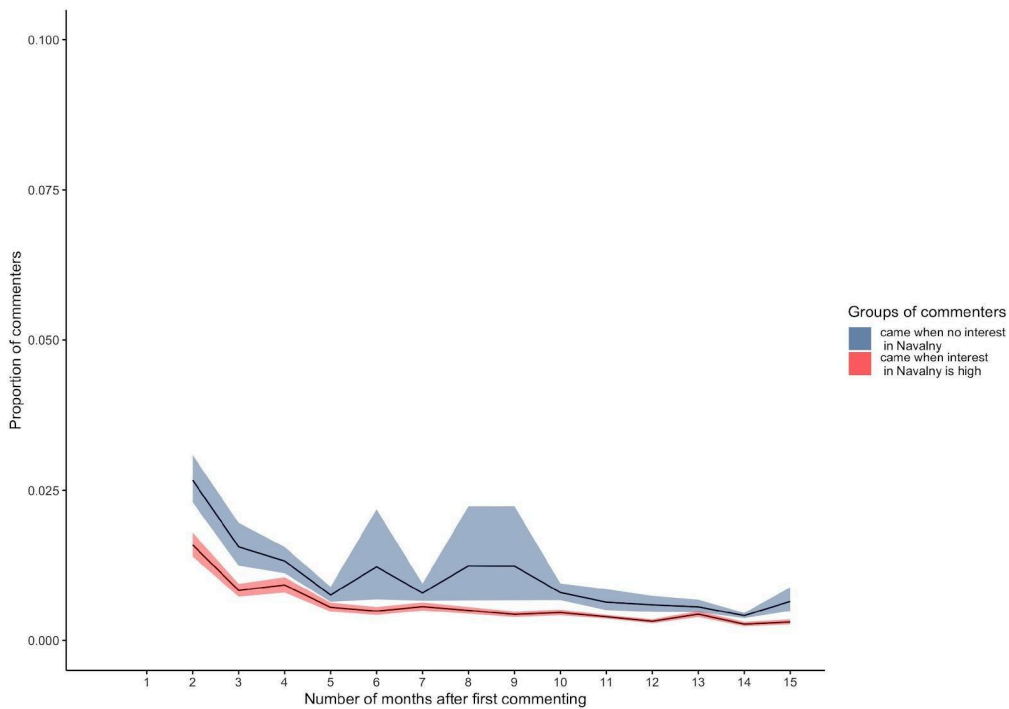


Figure 12. Retention of two commenters' types after the video release (in months after release), with bootstrapped 95% confidence intervals, zoomed view.

Testing Hypothesis 1B: *Those who start engaging in discussions expressing anti-opposition cues during a period of high interest in Navalny's personality are less likely to form a long-term relationship with the politician's community, unlike those who start engaging with Navalny's content in a less contentious period.*

I record the same dynamics when the focus is on commenters who entered the discussion using pro-government and, thus, anti-opposition cues (Figures 13 and F4). Users from high-interest periods are more likely to leave the community in the long run than their peers from low-interest periods.

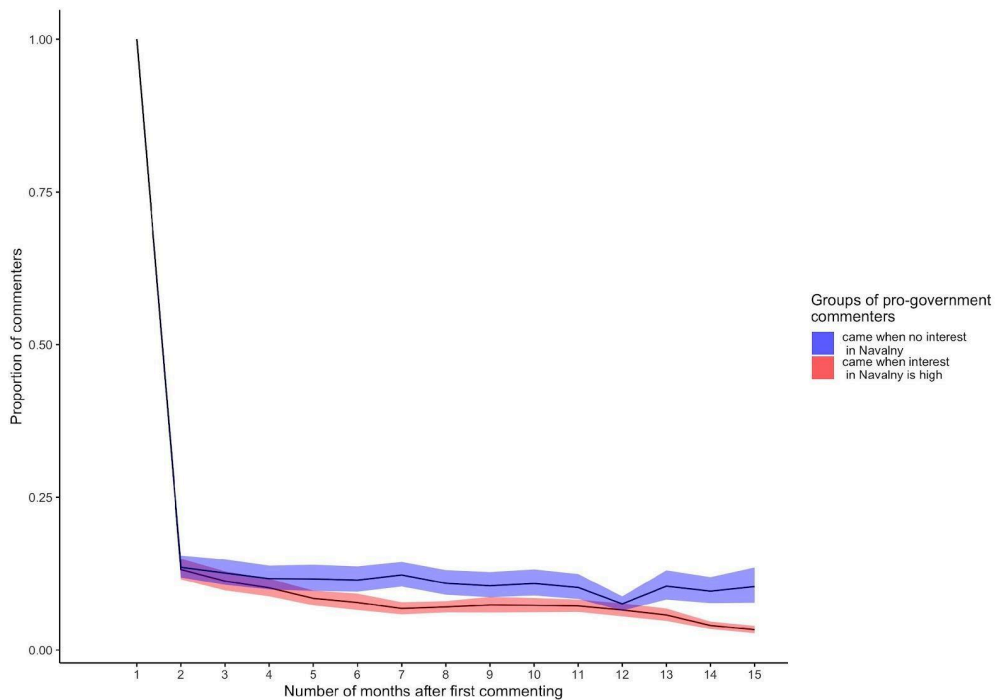


Figure 13. Retention of two commenters' types using pro-government cues (in months after release), with bootstrapped 95% confidence intervals.

The confidence intervals overlap even less in the case of pro-government commenters. The difference in retention was statistically significant after the fifth month. In the fifteenth month, the retention of those who came during the period of high interest in Navalny was 3.3 percent (95 percent confidence interval lies between 2.7 and 4 percent; see Table F6). The retention rate in the other group was 10.4 percent. The 95 percent confidence interval ranged from 7.7 to 13.5 percent (Table F7). In the Appendix E, Tables F12 and F13 and Figure F4 present the same retention analysis, but when the 15 months are taken through the emphasis on commenting, not the calendar sequence. These supplementary materials demonstrate the same dynamics as those in the main analysis. Thus, Hypothesis 1 B was confirmed.

Testing Hypothesis 1C: *Those who start engaging in discussions using anti-government cues during a period of high interest in Navalny are less likely to form a long-term relationship with the politician's community, unlike those who start engaging with Navalny's content in a less contentious period.*

Commenters who make derogatory references to the government in their first post are also retained in Navalny's community more often when this interaction occurs during a period of low interest in the politician (Figures 14 and F5). Therefore, in favor of the no-hype period, there is a two-fold difference in the average values for the fifteenth month (10.8 percent versus 5.6 percent, see Tables F8 and F9 for more information on confidence intervals). The modification of retention analysis with a focus on the fact of commenting rather than the calendar sequence is presented at Tables F14, F15, and Figure F5 in Appendix. In this regard, we see a similar trend, as in the case of YouTube commenters in general (Hypothesis 1A) and those who enter discussions using pro-government cues (Hypothesis 1 B).

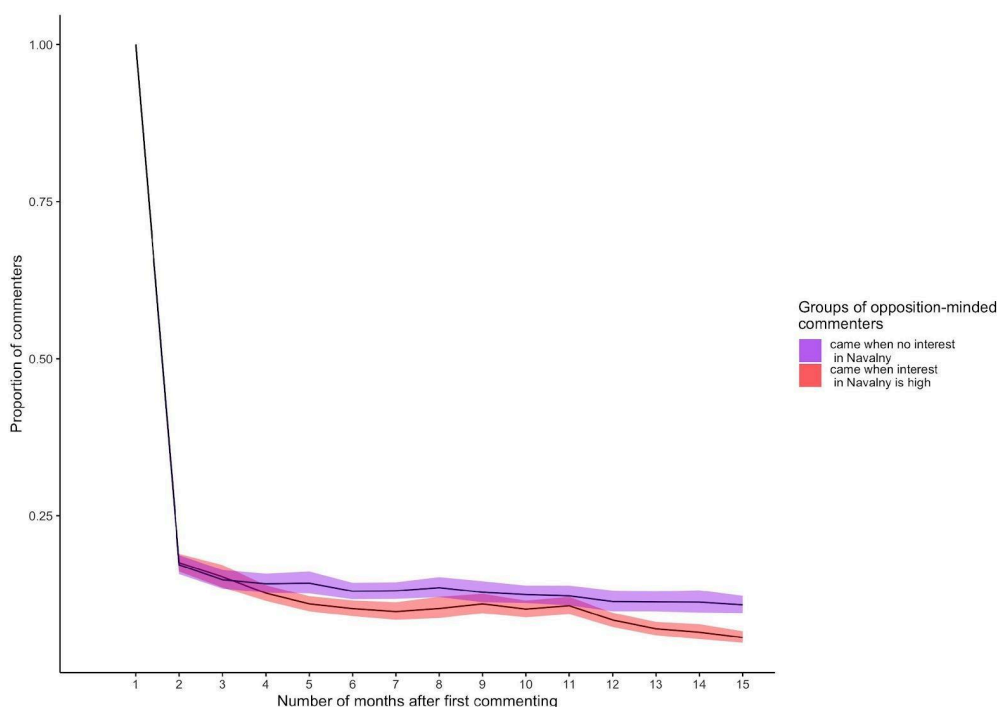


Figure 14. Retention of two commenters' types using pro-opposition cues (in months after release), with bootstrapped 95% confidence intervals.

3.5.2 Toxicity of comments

Research Question 2 about the extent of toxicity in the discussions taking place on Navalny's YouTube channel requires establishing a baseline at the level of incivility and how discussions in Navalny's community differ from

it. Figures [15](#) and [H1](#) compare the toxicity of discussions on Navalny's channel with a sample of comments from an apolitical celebrity channel, Evening Urgant. Overall, the level of incivility was much higher in Navalny's community, which is reflected in all three types of comments. On average, top-level comments with threads are more uncivil than messages posted in threads and top-level comments that do not open a discussion. I also conducted a formal test for statistical significance using the non-parametric Kruskal-Wallis test for the analysis of variance and Dunn's test of multiple comparisons, which confirm this conclusion about the statistical significance of the results presented in Figure [15](#). The Kruskal-Wallis test statistic was 101,454 with 5 degrees of freedom, yielding a p-value of 0.00000000000000022. Pairwise comparisons using Dunn's test indicated that the toxicity scores of three types of comments posted on Navalny's community were observed to be significantly different and higher than those posted on Urgant's YouTube channel. Thus, political discussions in Navalny's community carry a higher toxicity level than in an apolitical celebrity.

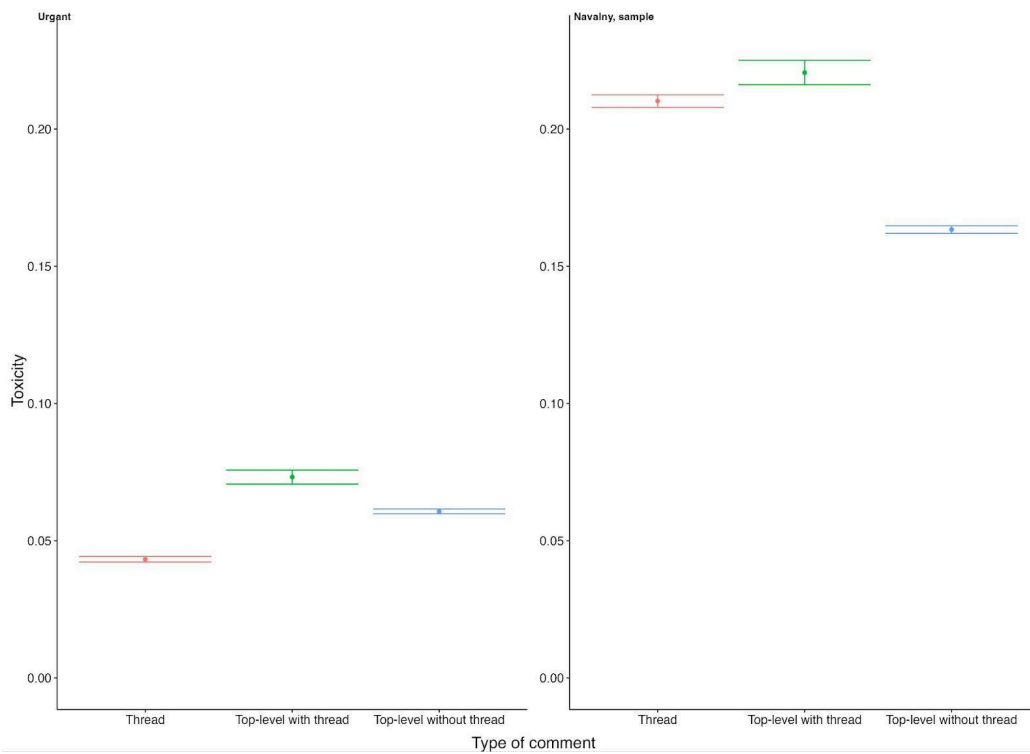


Figure 15. Toxicity in comments of Navalny's YouTube and apolitical - Evening Urgant - channel. The points are colored by the comment category, and error bars indicate the 95% confidence interval of the average toxicity.

Testing Hypothesis 2A: Uncivil comments are more likely to start discussion threads than civil ones.

The outcomes of logistic regression are provided in Table 12, where the dependent variable signifies whether a top-level comment initiates a thread, essentially sparking a discussion. Toxicity scores are used to categorize comments, with those scoring at or above 0.5 considered toxic, while those below 0.5 are deemed non-toxic.

Table 12: Logistic regression results of a top-level comment having a discussion thread on toxicity, count of likes, comment length, 2-hour intervals

Dependent variable:	
Type of top-level comment: with or without thread	
Model 1	Model 2

	<i>Coef</i>	SE	p-value	<i>Coef</i>	SE	p-value
Toxicity (binary)	0.091	0.021	0.0000 1	0.178	0.025	0.000
Count of Likes (log)	0.889	0.015	0.000	0.889	0.015	0.000
Comment length (log)	0.650	0.013	0.000	0.650	0.013	0.000
2nd 2 hours	0.053	0.030	0.074	0.054	0.032	0.090
3rd 2 hours	0.142	0.029	0.0000 0	0.137	0.031	0.00002
4th 2 hours	0.222	0.045	0.0000 0	0.221	0.048	0.00001
5th 2 hours	0.331	0.043	0.000	0.325	0.045	0.000
6th 2 hours	0.453	0.068	0.000	0.452	0.072	0.000
7th 2 hours	0.532	0.070	0.000	0.546	0.074	0.000
More than 14 hours	0.605	0.081	0.000	0.632	0.080	0.000
Intercept	-5.135	0.044	0.000	-5.147	0.044	0.000
Interaction of toxicity with time	No			Yes		
Observations		5,966,575				
Log Likelihood		-1,308,195				
Akaike Inf. Crit.		2,616,413			5,966,575 -1,308,005	
Bayesian Inf. Crit.		2,616,562			2,616,046 2,616,291	

Note: Video clustered standard errors are presented

Uncivil top-level comments demonstrate a greater propensity to start discussion threads. When converting the coefficient from Column 1 in Table 1 into a probability of initiating a thread, the resulting figure is 0.52. By introducing the interaction between toxicity and time, measured through 2-hour

intervals following a video release (Column 2), the coefficient for the variable of interest shows a slight increase, reaching 0.54 when converted to probability⁶³. Figure [H2](#) in the appendices presents the marginal effects of toxicity levels on the likelihood of a top-level comment sparking a discussion. Notably, this likelihood climbs from approximately 0.08 to nearly 0.2 across a toxicity range spanning from 0 to 1.

Several additional empirical tests of this hypothesis are conducted using centered toxicity scores, their squared terms, video fixed effects, and the inclusion of toxicity interactions with other variables (as detailed in Tables [H2](#) and [H3](#)). Generally, these results corroborate those reported in Table [12](#). However, accounting for the squared term of toxicity reveals a limitation: users tend to disengage with messages characterized by extreme incivility, as indicated in Table [H3](#) in the appendix [H](#).

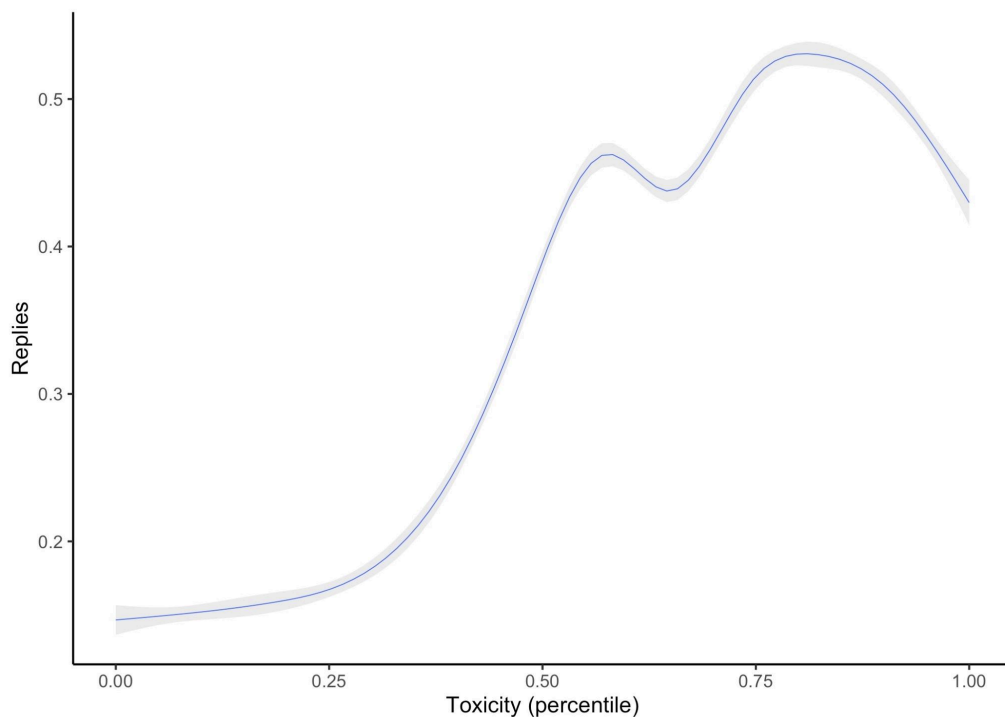


Figure 16: Comment replies and toxicity scores, $n = 5,966,575$ top-level comments. Local polynomial fits of the relationship between comment replies and the percentile of toxicity of top-level comments, with 95% confidence intervals.

⁶³ Here, I use the original, not binary, version of a toxicity score variable.

Furthermore, I present the findings of models that employ the number of replies received by top-level comments as an outcome measure. Figure [16](#) illustrates the relationship between toxicity scores and the number of replies garnered by these comments, employing local polynomial fits for analysis. The y-axis displays fitted reply counts, while the x-axis represents percentiles of toxicity scores. Figure [16](#) reveals a bimodal pattern. The 60th percentile corresponds to a toxicity score of 0.1, while the 80th percentile, reflecting a toxicity score of 0.31, receives the highest number of comments. This indicates that the number of replies increases until toxicity reaches the 80th percentile within the comment distribution, after which it begins to decline. In other words, comments that elicit the most replies from other users do not typically exhibit extreme forms of incivility. Additionally, as indicated in Table [H4](#), the average increase in the number of replies attracted by a top-level comment ranges from 0.5 to 1.2 percent when transitioning from civil to uncivil messages.

Moreover, I conducted local polynomial regression of “like” counts against toxicity distribution, as illustrated in Figure [H3](#) in the appendix [H](#). The peak of “like” counts occurs at the 50th percentile of the toxicity distribution, corresponding to a toxicity score of 0.07. In other words, comments predicted to be classified as toxic in only 7 percent of cases are the most popular in terms of receiving endorsements from other users.

In summary, Hypothesis 2A finds empirical evidence, yet the relationship between toxicity and discussions possesses a nuanced nature. The findings indicate that uncivil top-level comments are more likely to generate discussion threads. However, users appear less inclined to engage in debates with those who propagate extreme incivility towards others, potentially perceiving limited opportunities for constructive deliberation.

Testing Hypothesis 2B: *The longer the time after a video release, the higher the degree of the incivility of comments.*

Figures 17 and 18 illustrate how the level of toxicity changes in three comment types over time following a video's release, measured at 2-hour and 12-hour intervals, respectively.

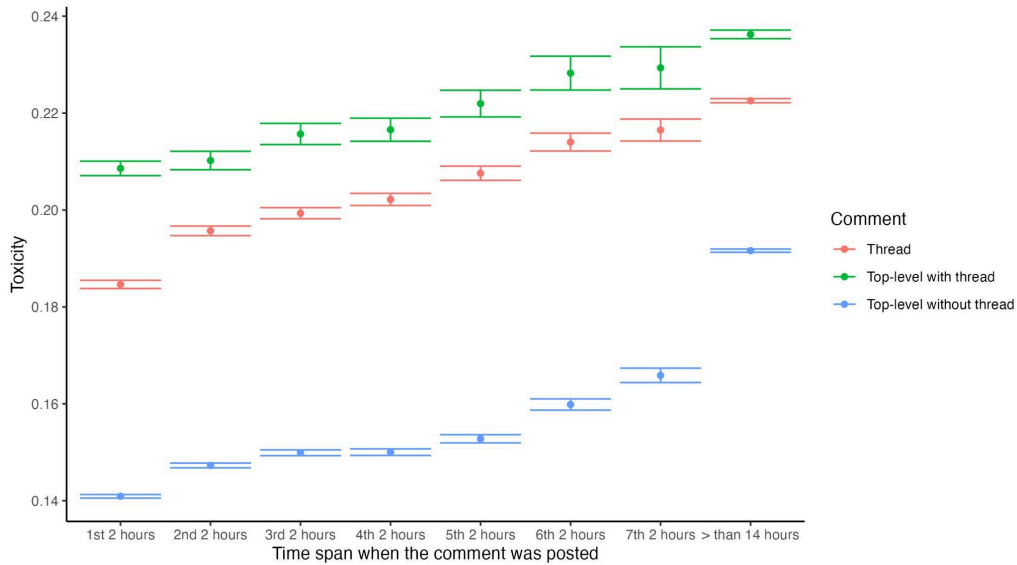


Figure 17: Toxicity score of comments by time of comment posting (2-hour bins). The points are colored by the comment category, and error bars indicate the 95% confidence interval of the mean toxicity for each 2-hour interval.

During the first hours, the toxicity level in each comment type is relatively low (Figure 17). Subsequently, there is a gradual increase in toxicity. After a few hours, the situation stabilizes for top-level comments with threads and thread comments, as demonstrated in Figure 18, which uses 12-hour intervals. However, the toxicity of top-level comments without threads continues to rise. Notably, top-level comments with threads consistently exhibit the highest toxicity scores across all time periods, while comments within threads tend to have lower toxicity levels. Conversely, top-level comments that do not initiate discussions are generally less toxic.

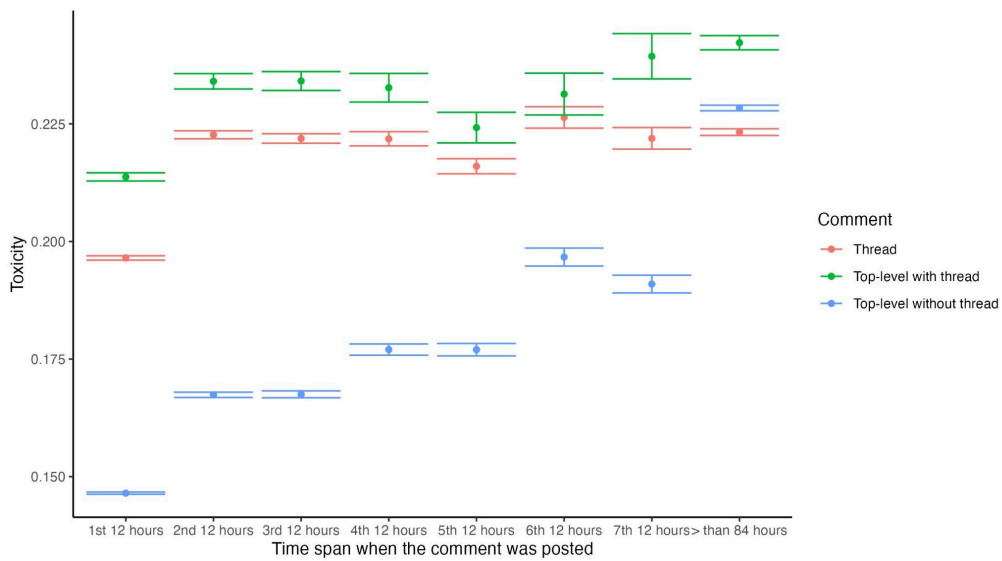


Figure 18: Toxicity score of comments by time of comment posting (12-hour bins). The points are colored by the comment category, and error bars indicate the 95% confidence interval of the mean toxicity for each 12-hour interval.

The regression results, exploring the relationship between toxicity and the timing of comment posting, can be found in Tables [H5](#) and [H6](#) in the appendix [H](#). Over time, users tend to compose more toxic top-level comments (although not reply comments). Furthermore, additional regression models concerning posting time, commenter types, and their comments suggest that toxic and infrequent commenters are more inclined to write comments later, especially as a video's initial virality wanes, as detailed in Tables [H7](#) and [H8](#).

Consequently, the toxicity of comments increases as time elapses following a video's release, reaching its peak at a certain level of incivility. However, the surge in toxicity for subsequent comments is primarily driven by commenters who typically produce more toxic posts, are infrequent commenters (leaning towards one-off interactions), and mainly engage when ongoing discussions within threads start to slow down.

3.5.3 Cross-cutting disagreement

Testing Hypothesis 3: Top-level comments attacking Navalny or the opposition are more likely to generate comments from the opposite side than other types of top-level comments (e.g., pro-opposition and neutral stances).

I present the results of multinomial regression of the discussion type in the thread on the sentiment of a top-level comment (pro-government, neutral, or opposition), whether it is toxic, the comment length, the number of likes it receives, and the time when a top-level comment was posted. The baseline level of the outcome is defined as the absence of any discussion beneath a top-level comment. Tables [13](#) and [14](#) contain columns corresponding to the other four levels of the dependent variable, all compared to the “no conversation” baseline type of discussion. The standard errors are clustered at the video level, and the main variable of interest, a top-level comment's sentiment, comprises three levels, with neutral sentiment serving as the baseline and integrated into the intercept.

Table 13: Results of multinomial logistic regression of discussion type

	Reference 'No discussion underneath of a top-level comment'					
	Column 1			Column 2		
	Attacks from both sides			Attacks on government		
	<i>Coef</i>	SE	p-value	<i>Coef</i>	SE	p-value
Pro-Government (baseline: neutral)	1.152	0.056	0.000	0.296	0.056	0.00000
Pro-Opposition (baseline: neutral)	-0.685	0.053	0.000	-0.056	0.029	0.297
Toxicity (binary)	0.404	0.048	0.000	0.204	0.028	0.00002
Comment length (log)	1.273	0.021	0.000	0.788	0.019	0.000
Count of Likes (log)	1.634	0.022	0.000	1.124	0.017	0.000
Second 2 hours	-0.081	0.054	0.133	0.074	0.036	0.037
Third 2 hours	-0.016	0.060	0.793	0.137	0.042	0.001
Fourth 2 hours	0.085	0.078	0.278	0.136	0.050	0.006

Fifth 2 hours	0.250	0.077	0.001	0.226	0.045	0.004
Sixth 2 hours	0.282	0.101	0.005	0.411	0.072	0.00005
Seventh 2 hours	0.490	0.090	0.00000	0.418	0.064	0.00001
After more than 14 hours	0.569	0.091	0.000	0.458	0.078	0.00000
Intercept (Neutral)	-12.636	0.097	0.000	-8.112	0.070	0.000
<hr/>						
Akaike Inf. Crit.						
			3,527,597			3,527,597
Bayesian Inf. Crit.			3,528,304			3,528,304
Observations			5,965,458			5,965,458

Note: Video clustered standard errors are presented

The observed associations align with the hypothesis. A pro-government sentiment expressed in a top-level comment is linked to subsequent attacks on the government within the thread (Table 13, column 2). When log odds are converted into probabilities, this corresponds to 0.57. In other words, when a top-level comment conveys a pro-government sentiment, it is more likely to attract government criticism compared to a neutral top-level comment serving as the baseline.

Table 14: Results of multinomial logistic regression of discussion type

	Reference 'No discussion underneath of a top-level comment'					
	Column 1			Column 2		
	Attacks on opposition			Discussion		
	<i>Coef</i>	SE	p-value	<i>Coef</i>	SE	p-value
Pro-Government (baseline: neutral)	1.191	0.039	0.000	0.432	0.038	0.000
Pro-Opposition (baseline: neutral)	-0.893	0.042	0.000	-0.352	0.027	0.000
Toxicity (binary)	0.209	0.030	0.00002	0.061	0.018	0.202
Comment length (log)	0.939	0.016	0.000	0.603	0.013	0.000
Count of Likes (log)	1.045	0.019	0.000	0.837	0.013	0.000

Second 2 hours	0.001	0.042	0.979	0.065	0.027	0.017
Third 2 hours	0.102	0.042	0.015	0.153	0.028	0.000
Fourth 2 hours	0.236	0.061	0.000	0.233	0.046	0.000
Fifth 2 hours	0.426	0.069	0.00000	0.336	0.042	0.00002
Sixth 2 hours	0.516	0.093	0.00000	0.453	0.068	0.00001
Seventh 2 hours	0.563	0.081	0.000	0.536	0.075	0.000
After more than 14 hours	0.699	0.085	0.000	0.599	0.082	0.000
Intercept (Neutral)	-8.589	0.061	0.000	-5.142	0.043	0.000
<hr/>						
Akaike Inf. Crit.						
			3,527,597			3,527,597
Bayesian Inf. Crit.			3,528,304			3,528,304
Observations			5,965,458			5,965,458
<hr/>						

Note: Video clustered standard errors are presented.

At the same time, the probability of witnessing attacks from both sides in a comment thread, compared to no discussion, is 0.76 when transitioning from a neutral comment category to a pro-government sentiment (Table 13, Column 1). Interestingly, attacks on the opposition are clustered, with pro-government sentiment in a top-level comment being associated with the same sentiment in the thread beneath it (as seen in Table 14, Column 1). In this case, the probability of a pro-government sentiment is 0.77.

Regarding pro-opposition sentiment, top-level comments reflecting such sentiments are also linked to counterattacks from the opposing side, albeit with somewhat weaker substantive significance. Transitioning from a neutral comment category to a pro-opposition sentiment raises the probability of criticism targeting the opposition in the thread, compared to no discussion, by 0.29 (Table 14, Column 1). This observation suggests that the comments section is predominantly saturated with anti-government discourse, making pro-government narratives that deviate from the norm attract the attention of both those who share these beliefs and those who support Navalny and the opposition. Table 19 and Figure 12 indicate that the primary topics in top-level comments are sympathetic towards Navalny or contain sentiments criticizing

the ruling class. The observed association of pro-government discourse with discussions, in contrast to pro-opposition narratives, validates expectations regarding polarization within Alexei Navalny's YouTube community.

Appendix [I](#) presents the results of two multinomial regression models where the dependent variable has only three values, with “attacks from both sides” excluded. Attacks on the government and the opposition were examined in separate models (Tables [15](#) and [16](#)). Additionally, the Hausman-McFadden test for a multinomial logit model is included, confirming the validity of the independence of irrelevant alternatives assumption. Although the assumption of parallel lines does not hold, the results of ordered logistic regressions are also presented. The difference between Tables [17](#) and [18](#) lies in the highest order event considered. In Table [17](#), the highest order event is an attack on the government within the thread beneath the top-level comment, while in Table [18](#), the dependent variable attains its highest value when an attack on the opposition occurs in the thread beneath the top-level comment. The results from these analyses are largely consistent with those presented in Tables [13](#) and [14](#).

3.6 Conclusions

This analysis of discussions in the YouTube community of Alexei Navalny is driven by (a) his specific role as a stressor of the political regime, who was the only political actor capable of organizing a nationwide protest movement in 2013–2021, and (b) the role of the platform itself in the Russian media system, which continues to be a haven for political outsiders to broadcast alternative information to a broader audience. From 2013 to 2021, Alexei Navalny was the only political actor capable of organizing a nationwide protest movement. My analysis shows that Navalny widened the audience of his main social media channel after the release of resonant stories related to (1) the corruption of the elite, (2) the revelation of the network responsible for Navalny's poisoning, (3) targeting high-ranking officials, and (4) appealing to collective actions.

As results of structural topic modeling showed, commenters consider promoting Navalny's content among other YouTube users and wider audiences

as an important effort to gain more like-minded people and eventually undermine the public support of the regime. Based on the comparison of the toxicity in comments posted on Navalny's channel with the popular entertainment channel "Evening Urgant", I demonstrate how discussions on Navalny's community are more uncivil than on an apolitical celebrity channel.

One-off commenters (i.e., those who write a comment only once and do not contribute to the discussion) outnumbered those who commented more often, but the latter category of commenters produced eight times more comments. If one-off commenters were involved in discussions more often during periods of high interest in Navalny's activities, prolific commenters joined predominantly when public interest in the Russian opposition leader was below average.

Retention analysis of two cohorts (those who started commenting in Navalny's community when interest in him was high and it was not) showed that affective attunement around socially important events was less likely to keep newcomers in the community in the long run. I found that the cohort of commenters who first engaged with Navalny's content during a period of high public interest in the politician's activities was less likely to stay in the community over the next 15 months. Conversely, those who started commenting when there was no high interest in Navalny in the long run linger more in the community of Russia's most vocal opposition politician. Opposition critics and supporters show similar trends. Users who joined during a period of high interest in Navalny stayed in his community less frequently than those who did so during a period of relatively low interest from the general public.

Even though I do not study the causes and mechanism of such behavior, I can speculate on this based on the theoretical premises that were proposed by researchers earlier. The hype around Navalny and the associated views of his main media channel - a YouTube channel - characterizes the process of affective attunement, which, by definition, cannot last long but can be intensive. This intensity is expressed primarily in the practice of commenting and framed as *connective effervescence* (Ventura et al., 2021) when people,

following socially important events, express support for one side or another in streaming chats and act as a kind of fan crowd. Their comments tend to be short, repetitive, and have a limited potential for deliberation. Although my focus is not on live debates but on high-quality investigative content intended to have far-reaching political implications, connective effervescence can still be seen. As shown by the results of the text analysis of comments, appeals for coordinated actions to get a video promoted in the trending tab of YouTube is one of the most common topics. Thus, users are ready to mobilize to promote the video and break the informational barrier built by authorities.

Based on my analysis of discussions in the comment section of Alexei Navalny's YouTube channel, three significant contributions emerge in the literature on political communication within a non-democratic context.

First, the role of incivility in influencing discussions has a dual nature. On one hand, comments that elicit responses from other users in the form of text replies tend to be more uncivil. However, this relationship between replies and toxicity is not linear, and there are limits to the impact of incivility on driving further discussion. Extremely toxic messages are less likely to prompt reactions from users. In contrast to previous studies suggesting that initial posts can escalate incivility, creating a spiral of toxicity (Kim et al., 2021; Rega & Marchetti, 2021, Unkel & Kümpel, 2022), the dataset I analyzed reveals that top-level comments with threads are more uncivil than subsequent comments. This finding underscores the significance of incivility within the specific context of Russia, where authorities place restrictions on political expression and regulate online communication practices (e.g., prohibiting the use of swear words by law) (Bodrunova et al., 2021). To be discussed, a comment must have some potential to signal that the environment is free to express opinions in a frank manner, without slipping into the direct abuse of the participants.

Second, the toxicity level of comments tends to increase over time. However, the commenters responsible for driving this increase in toxicity differ from those engaging in conversations when a video initially garners attention from the audience within a few hours after its release. The former group comprises sporadic commenters who employ more toxic language, primarily

composing top-level comments (i.e., comments not participating in the ongoing discussion threads).

Third, pro-government messages posted as top-level comments in the community of Russia's opposition leader serve as a crossroads between two opposing camps. Navalny's supporters tend to respond to attacks from their adversaries. Simultaneously, the pro-government sentiment expressed in the form of thread comments focuses on pockets of disagreement initiated by other pro-government commenters. This result suggests that social media communities do not necessarily create impenetrable ideological echo chambers where members are shielded from opposing viewpoints. Instead, they may encounter dissenting ideas, which can further unify the group and reinforce a shared identity. Consequently, it becomes crucial to respond to challenges from the “other side.” The lower activity of pro-government commenters in commenting on pro-opposition posts can be attributed to their intention to assert their presence and disagreement with the prevailing narrative. Replies to top-level comments receive less attention due to YouTube's comment section design, whereas top-level comments are more effective at attracting the notice of other users.

Future research should delve into more comprehensive and nuanced investigations of online conversations. This entails placing a particular emphasis on dissecting the topical dimensions of discussions and considering various contextual factors, including the sentiments expressed in other messages, the characteristics of commenters, the impact of algorithms, and so forth. Specifically, I have not fully addressed how much algorithms influence discussions. We still need a clear explanation from YouTube about exactly how comments are ranked in the section if the user does not deliberately select the option to display them by the time of posting. I tried to control for this aspect by incorporating the timing of comments within specific time periods (2-hour intervals) into the model, assuming that fresh comments in relatively small periods would still impact rankings. However, it is worth recognizing that the black box of the algorithmic comment feed is unlikely to be explained in such a way. In addition, the finding that pro-government commenters create hubs of

pro-government narrative can be considered an attempt by pro-government actors to exploit the YouTube recommendation system in their favor. Again, I cannot say definitively how exactly pro-government commenters are coordinated (this is beyond the scope of my research design), but the available evidence from investigative journalists prevents us from excluding this scenario (Khazan, 2013; Chen, 2015; Doctorow, 2015; Demirjian, 2015). Nevertheless, these findings underscore the necessity of scrutinizing digital trace data related to political communication in Russia. This is particularly crucial as traditional self-reporting methods have revealed their limitations, especially in light of the evolving dynamics of the Russian-Ukrainian conflict.

Conclusions and Implications

During the evolution of Putin's rule, the Russian political regime has experienced different stages of interaction between the authorities and civil society/opposition. But this story continues because the manifestation of the personalist regime - Vladimir Putin - is still in power.

In this dissertation, I aimed to show how the government and political actors who oppose it use the communication field to reach their specific goals - to maintain a dominant position and change the existing regime, respectively. I started from the theoretical assumption that when analyzing Russian autocracy, we cannot consider the practices developed in authoritarian regimes as a reflection of democracy, i.e., through recording the absence of certain democratic elements. Authoritarian regimes have their own logic of development. Therefore, Svoblik's minimalist definition of autocracy (Svoblik, 2012) manifested in two dimensions (the relationship between the ruling class and the ruled, as well as relationships within the ruling class itself) seemed to me to be the right research strategy. The emphasis on these two aspects allowed me to move away from the derivation of many categories of autocracies that are neither mutually exclusive nor collectively exhaustive. Instead, I focus on the key dimensions that determine the power relations in Russian autocracy. In this sense, political communication is increasingly critical for maintaining the existing power structures in the authoritarian context (Roberts, 2018; Guriev & Treisman, 2022; Gainous et al., 2023). I address the role of political communication, both from the perspective of the two main actors (government and opposition) and their interaction with citizens, which is the first dimension for the study of autocracies, according to Svoblik (2012). An equally important aspect is the role of communication carried out by central authorities with their regional and local subordinates (the second aspect of Svoblik's framework), which was also studied in this dissertation.

4.1 Main takeaways

I focus on the media environment where political actors (government and opposition) operate and compete with each other. First, I provide a concise overview of the development of Russia's media system since the collapse of the Soviet Union. This overview demonstrates the media's role in consolidating Vladimir Putin's power during the initial phase of his leadership. As mainstream media sources, particularly television, the primary medium of political information for Russians, have forfeited their autonomy, the Internet has emerged as a vital platform for propagating alternative political narratives. The government, in turn, has also realized the need to have a presence and establish a dominant position on the Internet. My dissertation analyzes the government's and the opposition's strategies in the fight to spread their narrative on this domain.

I show how the aspiration of the ruling regime to limit/eliminate opposition actors seeking to mobilize citizens in anti-government protest is accompanied by restrictive policies regarding the media sphere. This, in turn, leads to media polarization when media outlets move away from the principles of neutral coverage of events, increasingly leaning towards one of two political poles (pro-government or opposition).

At the same time, the Kremlin understands the necessity to work with the citizens who express loyalty. In the second chapter of the dissertation, I show how an online system of citizens' complaints helps the central authorities in Russia, on the one hand, collect information about the areas in which citizens express dissatisfaction with the performance of the local and regional levels of governance. On the other hand, this system allows the Kremlin to hold regional and local subordinates responsible for outright failures in governance. Finally, the Kremlin uses communications through the Telegram ecosystem, which has become the most crucial channel for hosting and disseminating political content in Russia, to signal regional authorities that Moscow is monitoring their actions.

The combination of (1) repression against those who openly express disagreement with the government and (2) persuasion for others can be viewed through the prism of the interaction of different actors within the ruling regime (security services versus civilian officials). I do not consider these processes from that perspective because the focus on the communicative component of the Russian political regime allows me to avoid discerning the actors responsible for various aspects of maintaining the status quo in the political system as a whole.

Regarding the opposition's strategy for communicating with citizens, I studied this issue using the case of Alexei Navalny, the leading opposition politician in Russia in the last decade. He is the only politician who has created a large-scale movement throughout the country, ready to mobilize supporters to participate in collective protest actions. This was, to some extent, the result of his active presence on social media, particularly on YouTube, where videos about the ruling elite's corruption on his channel received tens of millions of views. In the context of a depoliticized population, the task of the opposition is to, first of all, arouse people's interest in politics. In this regard, the themes of corruption, severe social inequality, and hyper-consumption by members of the ruling elite, along with an explanation of the mechanisms of political participation that can end this, have become the main themes of Navalny's political program. In other words, the strategic emphasis on the part of the opposition was placed on the polarization of society in line with the populist appeal of "*us (ordinary people) against them (unfairly rich elite).*"

Regarding the opposition's communication strategy, I decided to focus on Navalny's main social media platform - his YouTube channel. I studied user activity on this platform from the perspective of (1) the content, (2) its degree of incivility, (3) the composition of the participants, (4) the longevity of their interactions with other community members, and (5) the commenters' engagement with the pro-government narrative presented within the community of the most vocal opposition politician. The decision to analyze users' content, that is, comments on Navalny's video, was driven by the need to understand what effect Navalny's media activities have on the audience.

In Chapter 3, I show how newcomers to Navalny's community during periods of high interest in his personality are less likely to remain long-term than those who join during low-interest periods. Prolific commenters outnumber one-off commenters, but the latter contribute more during high-interest periods in Navalny's activities. Therefore, affective attunement around Navalny creates intense, short-lived engagement characterized by repetitive, limited-deliberation comments. The commenters of Navalny's videos consider commenting and sharing activities as forms of online collective action to weaken the regime's support by making other people informed about the elite's corruption. Overall, the discussions that happen in this community are more uncivil compared to apolitical YouTube channels. Comments' toxicity increases over time, with sporadic or one-off commenters using more toxic language. Incivility in discussions has a two-fold impact: it drives the conversation but limits it when users post extremely toxic messages. Finally, I demonstrate how pro-government comments on Navalny's channel are associated with cross-cutting interactions with anti-government sentiments, challenging the idea of social media as ideological echo chambers.

Empirically, the structure of the dissertation is divided into two parts due to the focus on the two main actors of the political process in an autocracy: the government and the opposition. When discussing the implications, I prefer to follow the same logic.

4.2 Implications for the study of authoritarian practices

Contemporary authoritarian regimes, with rare exceptions, build their dominance exclusively on the repression of citizens. As this study showed, the stability of the regime rests on how convincing the strategy is to depoliticize citizens through an emphasis on "real deals" to improve their quality of life (good quality roads and infrastructure, stable social payments, the opportunity to complain about the actions of the authorities in terms of social policy, and getting an instant response from them). Putin's regime, prior to the full-scale invasion of Ukraine in 2022, was a champion in building a communication strategy built on creating such an image of an effective leader. Authoritarian

responsiveness, as shown in my study, is manifested in responding to non-political requests from citizens when they do not question their loyalty to the regime. Such a strategy looks quite viable in the long run since the demand for political competition from citizens may ultimately not mature if the economy operates without severe crises and the government can distribute social benefits among the population (even if on a truncated scale due to corruption). And here, the issue of authoritarian diffusion becomes relevant.

Not only do democracies learn from each other, but autocracies also learn practices (Bader, 2014) from their peers that are useful to maintain power (Gilardi & Wassrfallen, 2019). The core difference between democratic and autocratic diffusions is that the latter does not impose a certain vision of domestic political arrangements. In other words, Russian authorities are interested in creating global conditions when autocratic practices are no longer condemned and sanctioned by the international community or given so much salience (Ambrosio, 2010). Such non-democracies actively declare the need to respect their state sovereignty. In the mid-2000s, this desire in Russia was formulated in the concept of “sovereign democracy.” There is nothing democratic at its core, except for the decorative institutions of elections, where there is no real competition when it comes to the election of the head of state. Ambrosio distinguishes two mechanisms of diffusion: relevance and efficiency (Ambrosio, 2010). The second suggests that autocrats borrow from each other practices that are effective in solving existing problems. This applies to both economic and PR issues in the international arena. With the emergence of new technologies that have opened up opportunities for coordinating and mobilizing political opponents, the task of responding to such challenges becomes urgent.

The Chinese example is remarkable here. Many autocrats like the idea of capitalizing on economic liberalization, using the tools of a market economy to provide the treasury with the necessary finances while establishing almost total control over political opposition and freedom of speech. On the one hand, Russian authorities are inspired by some practices and infrastructural decisions

related to Internet governance implemented by the Chinese Communist Party⁶⁴. As documented in the extant literature, the Chinese model for dealing with unwanted information ranges from the well-known “Great Chinese Firewall” to an army of commentators called the “50 cent party” (Roberts, 2018; King, Pan & Roberts, 2013). It is possible that the Russian authorities adopted Chinese practices and began to develop the idea of a “sovereign Internet”, seeing the success of their eastern neighbors, especially in the historical prioritization of the infrastructural isolation of China from the global web (Howells & Henry, 2021). This applies both to building a technical infrastructure to slow down traffic and to putting pressure on foreign platforms. However, the Russian approach cannot be viewed as copying. Historically, the Runet was integrated into the global Internet with its international services unlike China. This makes direct copying of the Chinese model unlikely. The Russian model of Internet governance is more decentralized, not as comprehensive, more reactive, and less resource-intensive than the Chinese one. But this is precisely what opens up opportunities for exporting the practices developed in Russia to other authoritarian regimes (Howells & Henry, 2021), as some of the former USSR member states have already done (Deibert & Rohozinski, 2010).

Second, in line with the implications related to policy diffusion and communication, a comparison immediately suggests itself with the wave of informational autocracy described by Guriev and Treisman (2022). They discuss how information is presented, what role the media play, and repressions (how widespread they are). But these considerations can be extended in the context of the autocrats' Internet strategy. The logic of informational authoritarianism cannot avoid this, as online activity is becoming increasingly important in various aspects of societal life. Undoubtedly, informational autocrats are following these processes to advance their agenda online as well.

⁶⁴ Роскомнадзор проводит закрытые встречи с Киберадминистрацией Китая: обсуждают акции Навального и механизмы блокировок – эксклюзив "Системы" (Roskomnadzor [abbreviation for The Federal Service for Supervision of Communications, Information Technology and Mass Media] holds closed meetings with the Chinese Cyber Administration: they discuss Navalny's actions and blocking mechanisms - Sistema's exclusive) <https://www.currenttime.tv/a/rkn-vstrechi-s-kiberadministratsiy-kitaya-systema/32350123.htm>], in Russian

Therefore, Russian tools related to working with loyal citizens can be exported to other countries. For instance, researchers report similar communication trends carried out by the authorities in Kazakhstan, Russia's neighbor (Kurmanov, 2023).

This work, although it has lost direct relevance in terms of the opportunities for the opposition to mobilize the discontented after February 24, 2022, nevertheless provides food for thought about how the degree of polarization between opponents and supporters of the regime will increase. The regime is becoming increasingly intransigent towards its opponents against the backdrop of the war unleashed by Putin in Ukraine. Against this background, the opposition also sees the fight against the authorities as an existential challenge.

At the same time, even under such conditions, the feedback system from citizens does not lose its relevance for the Kremlin. The presidential administration launched an analog of the regional governance centers at the municipal level, creating municipal governance centers⁶⁵. Undoubtedly, working with the loyal population, which still harbors hope for a return to stability, which was the mantra of Putin's rule in his first two presidential terms, has the attention of political administrators in the Kremlin. In this regard, the exploration of the use of this public response system by Russian authorities requires further research efforts. The analysis presented in my dissertation is still preliminary. Further steps in research endeavors may include both the analysis of observational data and conducting field experiments to reveal incentives for the reaction of regional/local authorities to citizens' appeals. Moreover, more attention can be paid to the communication between the central and regional authorities in the context of the ongoing war in Ukraine. What is worthy to explore is how the regime exploits the war to indoctrinate and mobilize citizens and the state apparatus. At the moment, it is difficult to speculate about the effectiveness of such efforts. Therefore, how mobilization is presented to the population by regional/local authorities also

⁶⁵ Перечень поручений по итогам заседания Совета при Президенте по развитию местного самоуправления, <http://kremlin.ru/acts/assignments/orders/71296>

requires scholarly attention. The results of textual analysis of Telegram posts did not reveal the war in Ukraine as a separate topic. More accurate methods, such as keyword-assisted topic models (Eshima, Imai, & Sasaki, 2023) or distributed representation of words such as word embeddings (Rodriguez & Spirling, 2022) or pretrained transformer models (Laurer et al., 2024), can present a more granular picture of this.

The possible venue for future research is to study so-called performative governance in the non-democratic context (Ding, 2020; Ding, 2022) when local levels of governance do not have resources to solve the problems reported by citizens but have to create an impression of good governance among citizens. In other words, as Lueders (2022) points out, authoritarian responsiveness must also be considered regarding how substantive it is. Response to citizens' appeals itself is not enough to convince citizens that the government is effective and competent. The system of Regional Governance Centers deployed across the country by the Russian authorities, in principle, allows us to include this dimension in the research design, but at the moment, we do not have access to the data of all registered citizens' complaints. The study of the social media content produced by Regional Governance Centers as an alternative does not allow us to identify the total volume of solved problems. However, the very formulation of the question of how meaningful responsiveness is requires attention in the framework of future research.

4.3 Implications for the study of opposition strategies

For obvious reasons, such as the sensitivity with which citizens present their true political preferences to interviewers, the phenomenon of affective polarization in non-democracies has received little attention using traditional methodological tools, most notably surveys. But we should not underestimate attempts to address this issue from the perspective of observational digital data. This study is one such effort, and it answers the question of to what extent

polarized political discussions are in the online community of the most vocal Russian opposition politician, Alexei Navalny.

Contemporary politics is becoming more polarized (Alizada et al., 2022), especially within autocratic regimes where authorities can suppress dissent organisationally and even physically (Nugent, 2020 b). Polarization also has roots in the media environment, including social media, which contributes to the intensification of existing divisions, thereby creating a sense of fundamental and insurmountable differences in society (Törnberg, 2022). The hype around Navalny and the associated views of his main media channel - a YouTube channel - characterizes the process of affective attunement, which, by definition, cannot last long but can be intensive. This intensity is expressed primarily in the practice of commenting and framed as connective effervescence (Ventura et al., 2021) when people, following socially important events, express support for one side or another in streaming chats and act as a kind of fan crowd. Their comments tend to be short, repetitive, and have a limited potential for deliberation.

Although my focus is not on live debates but on high-quality investigative content intended to have far-reaching political implications, connective effervescence can still be seen. As shown by the results of the text analysis of comments, appeals for coordinated actions to get a video promoted in the trending tab of YouTube is one of the most common topics. Thus, users are ready to mobilize to promote the video and break the informational barrier built by authorities. This observation may be interpreted through the prism of the phenomenon called *slacktivism* (Morozov, 2012) when social media simultaneously creates the illusion of involvement by applying little effort to act collectively (to put the “like” button or write a comment to promote the video on the recommendation system of YouTube). In this regard, one may doubt the effectiveness of Navalny's active information campaign. Even though people watch Navalny's content, this does not necessarily have far-reaching consequences, because the level of political apathy in society remains high.

However, this interpretation is not satisfactory, taking into account subsequent research on slacktivism, which casts doubt on the negative

connotations of this phenomenon (Christensen, 2011; Jones, 2015; Madison & Klang, 2020). Not all forms of online activity should be considered the same (Lane & Cin, 2017) because they can be relevant to a specific context without any connotations about their deficiency. Moreover, there is heterogeneity in the perceptions of social media's influence on politics by different individuals and their subsequent participation in offline political actions (Kwak, Lane, Weeks, Kim, Lee, & Bachleda, 2018). Navalny's team comprehends that the information hype caused by the release of anticorruption investigations does not instantly create a community ready for collective action to change the political regime. The head of Navalny's regional campaign headquarters for the 2018 presidential elections, Leonid Volkov, clearly articulates that they consider their organizational and information activities as a gradient of opportunities to participate in politics: *“I have visualized it many times at meetings for volunteers as such a pyramid: a million supporters; one hundred thousand of them are people who can donate; ten thousand of them are those who can agitate; one thousand will come to our regional campaign headquarters; one hundred are ready to receive an administrative arrest; ten are ready to go to prison, and only one is Alexei Navalny”*⁶⁶.

Affective attunement does not necessarily create a community of active supporters, and does not significantly reduce the costs of collective action. But it allows the passage of the propaganda barrier and information restrictions faced by independent activists and politicians in autocracies. As a retrospective overview of the evolution of the movement created by Alexei Navalny shows, this information work and hype eventually led thousands of activists to become involved in the political activity of a nationwide movement in a geographically sparse country such as Russia. At the same time, such affective attunement eventually led to greater polarization in Russian politics. Subsequently, this

⁶⁶ "Базовая инфраструктура протеста никуда не денется" Константин Гаазе говорит с Леонидом Волковым о разгроме штабов Навального. Это подкаст, но мы его для вас расшифровали (да!) ("The basic infrastructure of the protest is not going anywhere" (in Russian) - Konstantin Gaaze speaks with Leonid Volkov about the defeat of Navalny's headquarters. This is a podcast, but we transcribed it for you (yes!), at <https://meduza.io/feature/2021/04/29/bazovaya-infrastruktura-protesta-nikuda-ne-denetsya>, accessed 29 October 2022

was manifested in the way the authorities dealt with both Alexei Navalny himself and his movement, whose main activists were forced to leave the country; some of them were put in jail, and the movement itself was declared extremist.

Although my work adds to the general theory of political communication in informational and electoral authoritarianism (as defined by pre-war Russia), its implications for the new realities of a political system with tight control over dissent are limited. Undoubtedly, the Russian-Ukrainian conflict and the earlier imprisonment of Alexei Navalny changed the political regime in Russia towards more control over citizens and suppressing collective action and dissent in general. But, as the experience of other autocracies shows (Nugent, 2020 b), mass repression only contributes to polarization. With the confrontation of “*us vs. them*”, suppression of dissent generates more emotional anger. In addition, not all foreign-origin social media platforms, including YouTube, were banned at the time this text was written. Independent journalists and political activists actively migrate to YouTube to continue their work, even if they are forced to flee the country due to repressions. And the reason YouTube is still available in Russia is that pro-government content also finds an appreciative home on this platform. This is one perspective for future research: to compare pro-government and opposition YouTube channels both in terms of the content they disseminate, their popularity (for instance, their appearance in the Trending tab, which is understudied in the domain of computational communication research), and the comments they receive, taking into consideration different stages in the regime's evolution.

Personalistic autocracies show similarities in their communication strategies to tackle challenges to keeping the status quo. Pro-government discourse becomes simpler, with greater potential to polarize society by blaming someone for a country's economic woes (Rozenas & Stukal, 2019; Aytac, 2021) or other issues (Alrababa'h & Blaydes, 2020; Laebens & Öztürk, 2020). Thus, political polarization does not have to be a corollary of social cleavages. Instead, we can consider it a by-product of political entrepreneurs' actions to pursue their goals (McCoy & Somer, 2018). Even under tighter

regime constraints, the Internet and social media, in particular, provide a platform for citizens to disseminate information and raise awareness about the incompatibility of their interests and values with those who benefit from the current state of affairs. This thesis appears to be supported by Belarusian and Russian examples featuring Sviatlana Tsikhanouskaya (Mateo, 2022) and Alexei Navalny.

The analysis presented in chapters devoted to the communication within Navalny's community provides new perspectives for future research. Despite efforts to collect as many keywords as possible and validate the results (iterated computer-assisted keyword selection, bootstrapping), I admit the naivety of the keyword-based approach with a focus on derogatory words to politicians when it comes to the retention analysis. One possible direction is to employ more sophisticated machine-learning techniques and a network analysis toolkit to study the pro-government and opposition-minded camps of commenters. Moreover, I consider a promising direction for future research to examine the association between offline events and online behavior through causal inference identification strategies.

Then, the snapshot nature of the data does not fully reflect the dynamic aspects of political discussion on Navalny's YouTube channel. Focusing on the period when the message was left by a user does not allow me to restore the whole context in which the user responded to someone. YouTube algorithms constantly change the configuration of comments when the user observes comments under the option "Top comments." Therefore, it is difficult to go beyond a simple description of discussions and make associations between different aspects of the political conversation.

The applied research design does not allow me to tell anything about who exactly comments on the posts of pro-government commenters in the threads while continuing to express pro-government discourse there. This may include other users responding to relevant signals as well as the authors of the original top-level comments. In general, the profile of commenters needs to be covered in future studies. It is also necessary to look at the substance of political conversation in the comment section. Undoubtedly, the sentiment of

messages and the timing of their posting are not the only reasons users engage with each other when discussing politics. Here, topics around which conversations evolve can reveal other aspects of online political communication between peers within oppositional communities in non-democracies. I also deliberately avoided framing pro-government comments as pro-government astroturfing activity in this study (Sanovich et al., 2018; Stukal et al., 2019; Stukal et al., 2017). I do not rule out this interpretation entirely, but attempts to identify inauthentic behavior require a different research toolkit and design.

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Appendices

Appendix A. STM of two Telegram channels operated by Dialog

I used structural topic modeling (STM) (Roberts, Stewart, & Tingley, 2019), which allows an analyst to include control variables to estimate corresponding topical content and topical prevalence. Topical content pertains to the likelihood of specific words appearing within a given topic, while topic prevalence signifies the ratio of topics in individual documents within a corpus. Topic modeling required conducting text pre-processing steps such as tokenization, conversion to lowercase, deletion of punctuation, stopwords⁶⁷, special characters, emojis, and numbers. Then, all the words were lemmatized, i.e., converted to their base form since, for the Russian language, lemmatization is more efficient for the performance of topic models than stemming (removal of the word ending) (May, Cotterell, & Durme, 2016). To do so, I exploited the MyStem program created by Yandex⁶⁸. I removed words that appear in fewer than one document (`lower.thresh` parameter of the `prepDocuments` command in the STM package), but I did not specify the upper bound because the list of stopwords⁶⁹ is quite extensive ($n=563$). Then, I did not sample the corpus but analyzed all the available Telegram messages due to available computational capacities. Structural topic modeling was implemented for channels operated by federal actors (two channels—unofficial and official).

One of the challenges commonly encountered in topic modeling is determining the number of topics for the model (*k-value*). The aim of choosing a *k-value* is to yield topics which are both semantically meaningful and distinguishable from one another. I follow the iterative approach implemented by Michael Bossetta and Bonacci (2023) and based on suggestions made by other researchers (Roberts et al., 2019; Moran Yarchi & Kligler-Vilenchik, 2021) to detect an appropriate number of topics. I exploited the `searchK` function from the STM package (Roberts et al., 2019) to generate a set of

⁶⁷ The source of Russian stopwords is the following:

<https://raw.githubusercontent.com/stopwords-iso/stopwords-ru/master/stopwords-ru.txt>

⁶⁸ <https://yandex.ru/dev/mystem/>

⁶⁹ <https://raw.githubusercontent.com/stopwords-iso/stopwords-ru/master/stopwords-ru.txt>

models with diagnostics parameters. Specifically, I orient on the balance between semantic coherence and exclusivity. Semantic coherence evaluates the frequency with which the most defining words of a topic co-occur. Exclusivity examines whether words in a topic are unique to that topic or are distributed across multiple topics. These metrics are instrumental in arriving at a topic model with interpretable topics that are clearly delineated from one another.

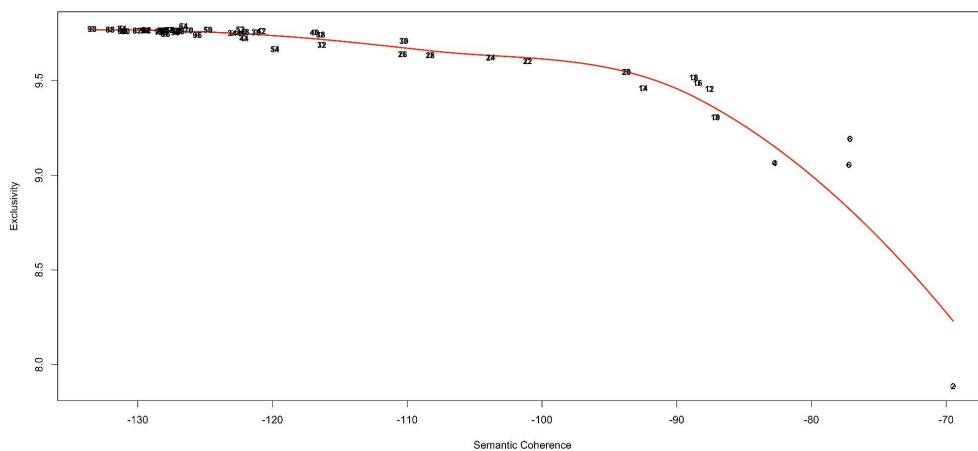


Figure A1. SearchK Topic Comparison for Broad Range of 2-100 Topics with interval = 2, Telegram channels linked to the Dialog organization

For the model targeting two Telegram channels operated by the Dialog organization, I first chose the interval of 2 within the range of 2 and 100 (Figure A1). Subsequently, I narrowed the spectrum, focusing on the range of 5 and 20 (both values included) (Figure A2). Finally, I checked the interval between 10 and 16 (both included). Figure A3 suggests that the most favorable balance between semantic coherence and exclusivity is provided when k -values is equal to 11.

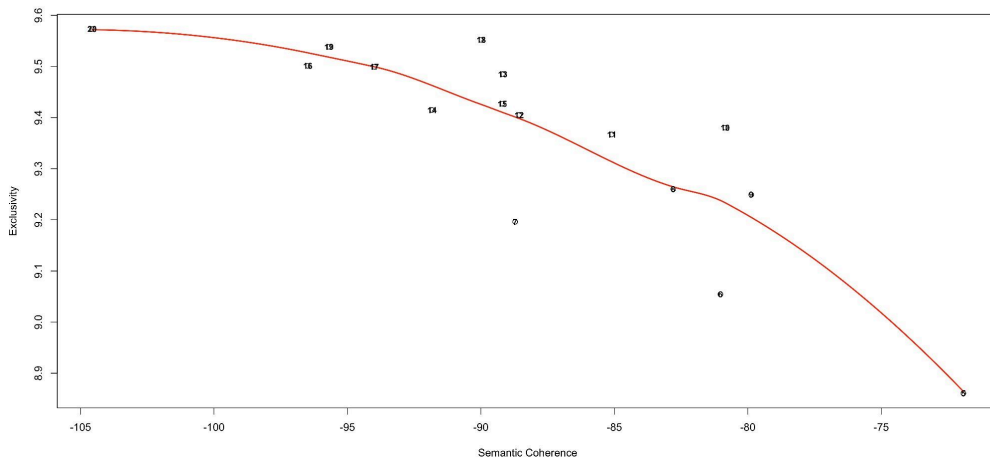


Figure A2. SearchK Topic Comparison for Range of 5-20 Topics, Telegram channels linked to the Dialog organization

Table [A1](#) (for the highest probability words) and Table [A2](#) (words with the highest frex score) present the results. Automated methods for determining the number of topics are auxiliary, serving as a guide for interpretation by a researcher. Therefore, I also provided examples of the posts illustrating topics.

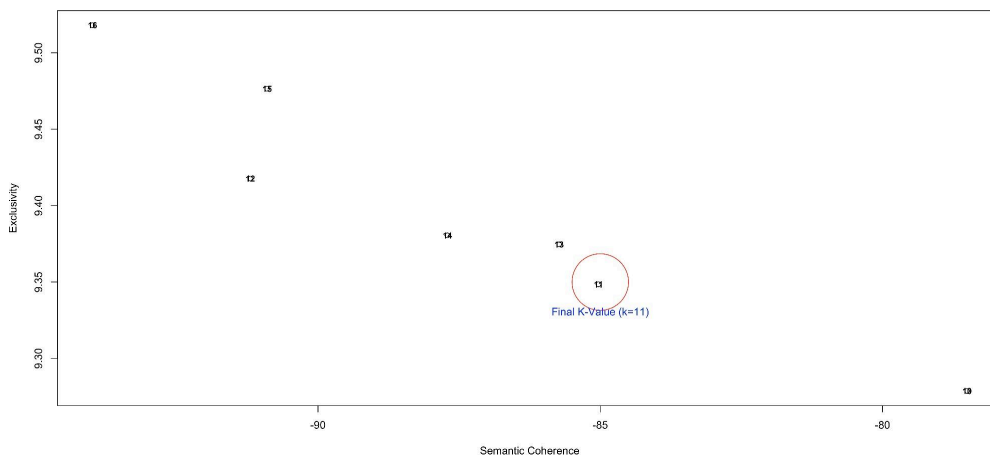


Figure A3. SearchK Topic Comparison for Range of 10-16 Topics, Telegram channels linked to the Dialog organization

Table A1. Summary of STM for the federal Telegram channels, 11 topics, focus on the highest probability words

Topic (Label)	Highest Probability Words	Translation to English	Share
1 (Changes in Communal Services, Public Transport etc. due to Feedback Mechanisms)	проблема, житель, жалоба, сообщение, решение, ситуация, школа	problem, resident, complaint, message, solution, situation, school	8%
2 (Regional Governance Centers' Insides and Career Trajectories)	регион, региональный, губернатор, центр, чиновник, выборы, управление	region, regional, governor, center, official, elections, management	10%
3 (Criticism of Regional Governance Centers)	руководитель, пост, сотрудник, коллега, канал, комментарий, решать	manager, post, employee, colleague, channel, comment, decide	16%
4 (Rankings of Regional Administrations)	рейтинг, область, лидер, полный, республика, пункт, месяц	ranking, region, leader, full, republic, point, month	7%
5 (Live Q&A)	глава, губернатор, регион, житель, прямой, эфир, руководитель	head, governor, region, resident, live, broadcast, leader	9%
6 (Public Transport and Traffic)	житель, транспорт, ремонт, карта, обращение, общественный, маршрут	resident, transport, repair, map, circulation, public, route	8%
7 (Responsiveness of Authorities)	область, регион, ответ, обращение, край, сообщение, показатель	region, region, response, appeal, region, message, indicator	7%
8 (Citizens' Appeals)	бот, чат, житель, вакцинация, специалист, информация, помощь	bot, chat, resident, vaccination, specialist, information, help	7%
9 (Government	проект, цифровой,	project, digital,	7%

Assistance)	развитие, сервис, федеральный, регион, исследование	development, service, federal, region, research	
10 (Dialog Organization)	диалог, ано, регион, интернет, коммуникация, рассказывать, развитие	Dialog, Autonomous Non-Commercial Organization [legal status in Russia], region, internet, communication, tell, development	10%
11 (Feedback from Citizens is Important for Authorities)	власть, центр, регион, связь, орган, гражданин, решение	power, center, region, communication, authority, citizen, decision	11%

Table A2. Summary of STM for the federal Telegram channels, 11 topics, focus on the words with highest frex scores

Topic (Label)	Frex Words	Translation to English	Share
1 (Changes in Communal Services, Public Transport etc. due to Feedback Mechanisms)	снег, мусор, уборка, вывоз, устранять, подрядчик, отопление	snow, garbage, cleaning, removal, eliminate, contractor, heating	8%
2 (Regional Governance Centers' Insides and Career Trajectories)	выборы, избирательный, карельский, федерал, захаров, илья, идеолог	elections, electoral, Karelian, federal, Zakharov, Ilya, ideologist	10%
3 (Criticism of Regional Governance Centers)	хакасский, подписчик, награждать, карьерный, редактор, красивый, необычный	Khakassian, subscriber, reward, career, editor, beautiful, unusual	16%
4 (Rankings of Regional Administrations)	рейтинг, троечник, аутсайдер, отличник, автономный, хорошист, подниматься	ranking, C student, outsider, excellent student, autonomous, good student, rise	7%

5 (Live Q&A)	эфир, прямой, николаев, владислав, совещание, гладков, глава	broadcast, live, Nikolaev, Vladislav, meeting, Gladnov, head	9%
6 (Public Transport and Traffic)	транспорт, маршрут, дорожный, автобус, транспортный, освещение, рейс	transport, route, road, bus, transport, lighting, flight	8%
7 (Responsiveness of Authorities)	первичный, астраханский, доля, самарский, обработка, показатель, мурманский	primary, [of] Astrakhan, share, [of] Samara, processing, indicator, [of] Murmansk	7%
8 (Citizens' Appeals)	чат, вакцинация, врач, минздрав, запись, медицинский, выплата	chat, vaccination, doctor, ministry of health, recording, medical, payment	7%
9 (Government Assistance)	исследование, реализация, проект, закон, бизнес, разработка, трансформация	research, implementation, project, law, business, development, transformation	7%
10 (Dialog Organization)	ано, истомин, табак, форум, семинар, гендиректор, генеральный	Autonomous Non-Commercial Organization [legal status in Russia], [Kirill] Istomin, [Vladimir] Tabak, forum, seminar, general director, general	10%
11 (Feedback from Citizens is Important for Authorities)	связь, обратный, орган, власть, муниципальный, управленческий, взаимодействие	communication, feedback, authority, authority, municipal, managerial, interaction	11%

Examples of posts illustrating topics

Topic 1 (Changes in Communal Services, Public Transport etc. due to Feedback Mechanisms):

Birobidzhan, 04.05.21, @ThisIsTsur

Get to know this, this is Birobidzhan: lack of playgrounds, flooding of the territory, destruction of sidewalks and pedestrian paths, unsuitable living quarters, lack of cold water, lack of electricity, complaints against management companies, problems with containers, spontaneous landfills in the city/parks/forest.

Marketing of the territory of the 80th level from Maxim Okhrimenko.

But everything could have been different:

New playgrounds, landscaping, new sidewalks and pedestrian paths, resettlement of dilapidated housing, repair of water supply and electrical networks, changes in the work of management companies, putting garbage disposal in order.



Source: <https://t.me/thisistsur/629>

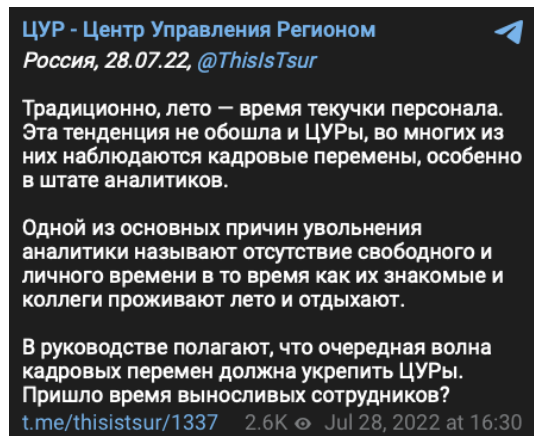
Topic 2 (Regional Governance Centers' Insides and Career Trajectories)

Russia, 07/28/22, @ThisIsTsur

Traditionally, summer is a time of staff turnover. This trend has not bypassed Regional Governance Centers; many of them are experiencing personnel changes, especially in the team of analysts.

Analysts say one of the main reasons for dismissal is the lack of free time while their friends and colleagues are spending the summer and relaxing.

[However,] The management believes that the next wave of personnel changes should strengthen the Regional Governance Centers. Is it time for resilient employees?



Source: <https://t.me/thisistsur/1337>

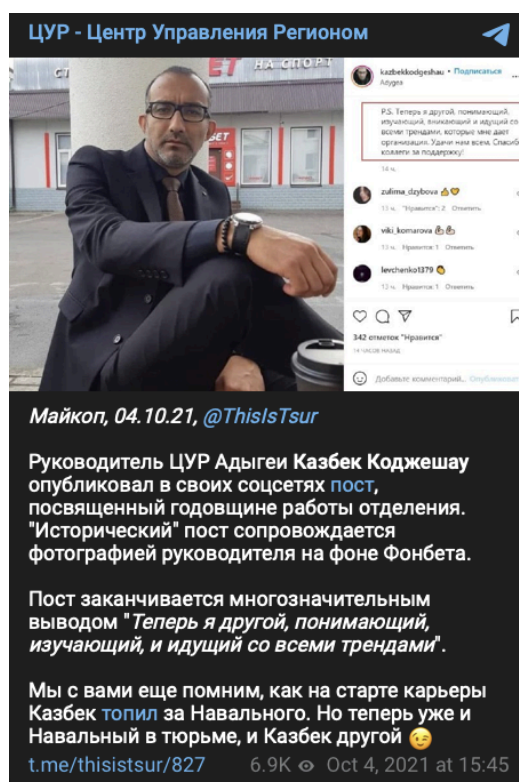
Topic 3 (Criticism of Regional Governance Centers)

Maykop, 04.10.21, @ThisIsTsur

The head of the Regional Governance Center of Adygea, Kazbek Kojeshau, published a post on his social media dedicated to the anniversary of the department. The “historical” post is accompanied by a photo of the leader with Fonbet [betting company] in the background.

The post ends with the meaningful conclusion “Now I am different, understanding, studying, and going with all the trends.”

We still remember how at the start of his career, Kazbek supported Navalny. But now Navalny is in prison, and Kazbek is different 😊



Source: <https://t.me/thisistsur/827>

Topic 4 (Rankings of Regional Administrations)

Moscow, 11.06.22, @ThisIsTsur

Media ranking of Regional Governance Centers. May 2022. Excellent students.

Unexpectedly among the “outsiders” of last month, the Saratov region is gaining momentum over the month and becoming an “excellent” region, rising by 52 points.

No less surprising is the former “C” student Republic of Mari El, which moves up to “excellent” by 45 points.

Last month, the Regional Governance Center of Adygea was in the top three, but in May, alas, it dropped by 18 points. The Regional Governance Center of Primorsky Krai, which ended up in the “excellent” category, is also losing its leadership position, having dropped below 25 points.

The full rating can be viewed here.

ЦУР - Центр Управления Регионом

Медиарейтинг Центров управления регионом - май 2022
 Подготовлен телеграм каналом ЦУР - Центр управления регионом @ThisIsTsur
 Рейтинг учитывает количество упоминаний ЦУР в СМИ за май 2022 года.
 Используются сервисы Яндекс.Новости, Google.Новости и Brand Analytics.

Место в мае	Регион	Количество упоминаний в СМИ	Место в апреле	Изменение
Отличники				
21	Республика Адыгея	166	3	-18
22	Республика Марий Эл	164	67	45
23	Чувашская Республика	162	8	-15
24	Краснодарский край	158	48	24
25	Смоленская область	154	7	-18
26	Республика Крым	154	40	14
27	Нижегородская область	144	32	5
28	Калужская область	133	43	15
29	Саратовская область	123	81	52
30	Приморский край	122	5	-25
31	Иркутская область	115	29	-2
32	Архангельская область	115	27	-5
33	Липецкая область	107	65	32
34	Алтайский край	106	57	23
35	Пермский край	100	61	26
36	Кировская область	99	17	-19
37	Ростовская область	99	76	39
38	Амурская область	97	23	-15
39	Белгородская область	93	22	-17
40	Свердловская область	91	37	-3

Москва, 11.06.22, @ThisIsTsur

Медиарейтинг ЦУР. Май 2022. Отличники.

Неожиданно попавшая в "аутсайдеры" прошлого месяца Саратовская область за месяц набирает обороты и становится "отличником", поднявшись на 52 пункта.

Не меньше удивляет бывший "троечник" республика Марий Эл, которая подтягивается до "отличников" на 45 пунктов.

В прошлом месяце ЦУР Адыгеи был в тройке лидеров, но в мае, увы, опустился на 18 пунктов. Теряет свои лидерские позиции и Приморский ЦУР, который оказался в "отличниках", спустившись ниже 25 пунктов.

Полный рейтинг можно посмотреть [тут](https://t.me/thisistsur/1269).
t.me/thisistsur/1269 2.2K edited Jun 11, 2022 at 14:19

Source: <https://t.me/thisistsur/1269>

Topic 5 (Live Q&A):

#Tambov_region, #Saratov_region, #Vologda_region,
 #Leningrad_region

The regions continue to conduct live Q&As with governors

Governor of the Tambov region Alexander Nikitin held a live Q&A with residents for the first time. Direct inclusion took place from the office of the Regional Governance Center. The event lasted more than two hours and about 800 requests were received. The head of the Center, Ekaterina Martynova, voiced the most popular questions from residents of the region.

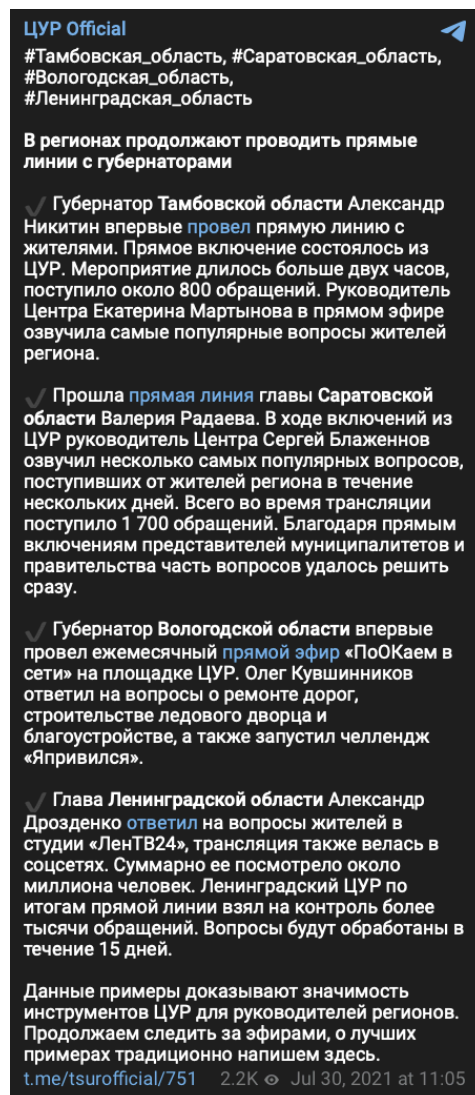
The live Q&A of the head of the Saratov region Valery Radaev has passed. During the inclusions from the office of the Regional Governance Center, the head of the Center, Sergei Blazhenov, voiced several of the most popular questions received from residents of the region over the course of

several days. A total of 1,700 requests were received during the broadcast. Thanks to direct input from representatives of municipalities and the government, some issues were resolved immediately.

For the first time, the Governor of the Vologda Region conducted a monthly live broadcast from the Regional Governance Center. Oleg Kuvshinnikov answered questions about road repairs, the construction of an ice palace and landscaping, and also launched the “I’m vaccinated” challenge.

Head of the Leningrad Region Alexander Drozdenko answered questions from residents in the LenTV24 studio; the broadcast was also conducted on social media platforms. In total, about a million people watched it. Based on the results of this live Q&A, the Regional Governance Center of the Leningrad Region took control of more than a thousand requests. Questions will be processed within 15 days.

These examples prove the importance of Regional Governance Centers as a tool for regional leaders. We continue to monitor the broadcasts; we will traditionally write about the best examples here.



Source: <https://t.me/tsurofficial/751>

Topic 6 (Public Transport and Traffic):

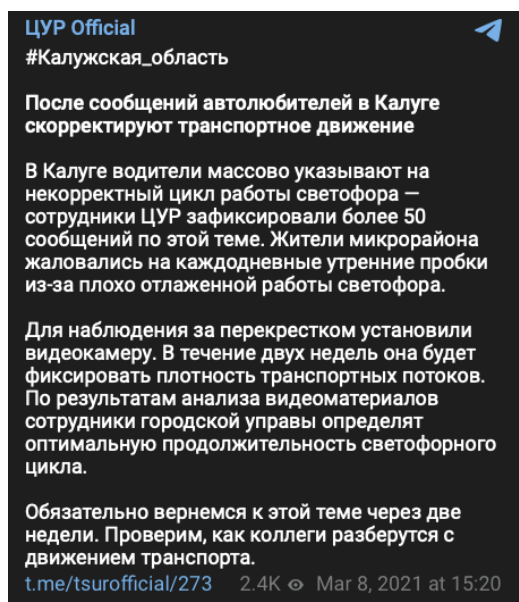
#Kaluga region

Traffic will be adjusted in Kaluga after reports from car drivers

In Kaluga, drivers en masse point out the incorrect cycle of the traffic light - the Regional Governance Center recorded more than 50 messages on this topic. Residents of the neighborhood complained about daily morning traffic jams due to poorly functioning traffic lights.

A video camera was installed to monitor the intersection. For two weeks it will record the density of traffic flows. Based on the results of the analysis of video materials, the city government will determine the optimal duration of the traffic light cycle.

We will definitely return to this topic in two weeks. Let's see how our colleagues deal with traffic.



Source: <https://t.me/tsurofficial/273>

Topic 7 (Responsiveness of Authorities):

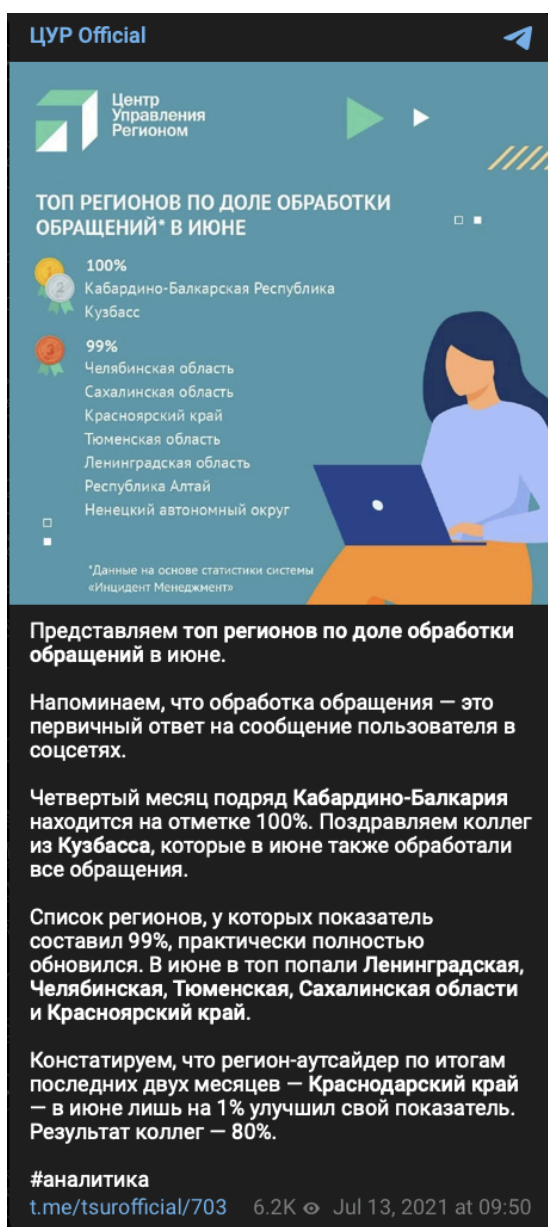
We present the top regions by the share of requests processed in June.

We remind you that processing a request is the primary response to a user's message on social media platforms.

For the fourth month in a row, Kabardino-Balkaria is at 100%. Congratulations to our colleagues from Kuzbass, who also processed all requests in June.

The list of regions with an indicator of 99% has been almost completely updated. In June, the Leningrad, Chelyabinsk, Tyumen, Sakhalin regions and Krasnoyarsky Krai made it to the top.

We note that the outsider region based on the results of the last two months - the Krasnodarsky Krai - improved its indicator by only 1% in June. The result of colleagues is 80%.



Source: <https://t.me/tsurofficial/703>

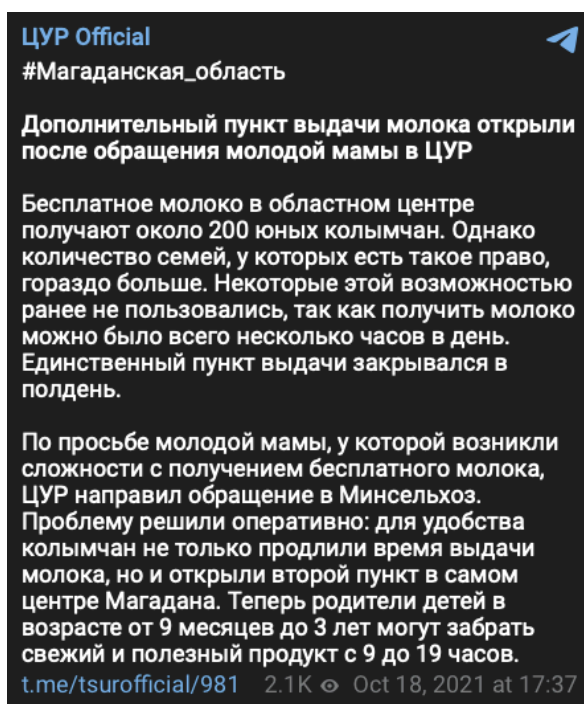
Topic 8 (Citizens' Appeals):

#Magadan Region

An additional milk distribution point was opened after a young mother contacted the Regional Governance Center

About 200 young Kolyma residents receive free milk. However, the number of families who have this right is much larger. Some had not previously used this opportunity, since milk could only be obtained for a few hours a day. The only pick-up point closed at noon.

At the request of a young mother who had difficulty obtaining free milk, the Regional Governance Center sent an appeal to the Ministry of Agriculture. The problem was solved promptly: for the convenience of Kolyma residents, they not only extended the milk distribution time, but also opened a second point in the very center of Magadan. Now parents of children aged 9 months to 3 years can pick up a fresh and healthy product from 9 a.m. to 7 p.m.



Source: <https://t.me/tsurofficial/981>

Topic 9 (Government Assistance):

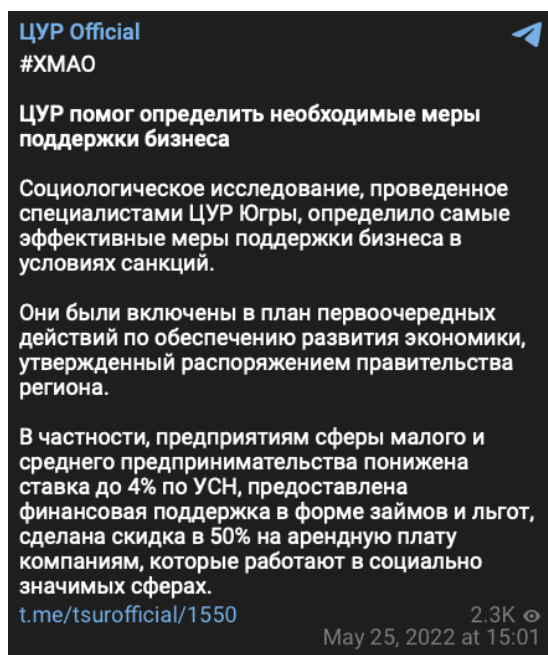
#Khanty-Mansi Autonomous Okrug

The Regional Governance Center helped identify the necessary business support measures

A sociological study conducted by Ugra SDG specialists identified the most effective measures to support business under sanctions.

They were included in the priority action plan to ensure economic development, approved by order of the regional government.

In particular, the rate for small and medium-sized businesses was reduced to 4% under the simplified tax system, financial support was provided in the form of loans and benefits, and a 50% discount was given on rent to companies that operate in socially significant areas.



Source: <https://t.me/tsurofficial/1550>

Topic 10 (Dialog Organization):

The full-time stage of the joint educational program of ANO “Dialog” and Moscow State University is taking place in Moscow

The final stage of the advanced training program “Digital Media Communications in the Modern World”, developed by ANO “Dialog” and Moscow State University has started. This is the country's first extensive educational program in digital media communications, which is implemented within the framework of the higher education system.

General Director of ANO “Dialog” Alexey Goreslavsky noted that the educational program made it possible to gain both theoretical and practical knowledge.

“I hope that the program turned out to be useful and interesting. We put a lot of effort into creating a configuration that would provide the knowledge we needed without being intrusive. When compiling the course, we proceeded from the fact that all its students should advance professionally and gain knowledge that will allow them to reach a new level,” Goreslavsky emphasized.

Students of the course completed homework, which will be reviewed by program experts at the in-person stage. Among them: Dean of the Faculty of Journalism of Moscow State University Elena Vartanova, Associate Professor of the Department of Theory and Economics of Media of the Faculty of Journalism of Moscow State University Anna Gureeva, as well as Deputy General Director of the ANO “Dialog” Vladimir Tabak.

Also, during the face-to-face phase, course participants will receive master classes, lectures, and business games, which will be conducted by

leading specialists from the Dialog Autonomous Non-Profit Organization.

Our telegram channel will closely monitor the events of the in-person stage, as well as share insights from the participants. The course ends on Saturday, June 19th.



Source: <https://t.me/tsurofficial/622>

Topic 11 (Feedback from Citizens is Important for Authorities):

#Yakutia

Regional Governance Center introduced indicators for working with feedback into the civil servant evaluation system

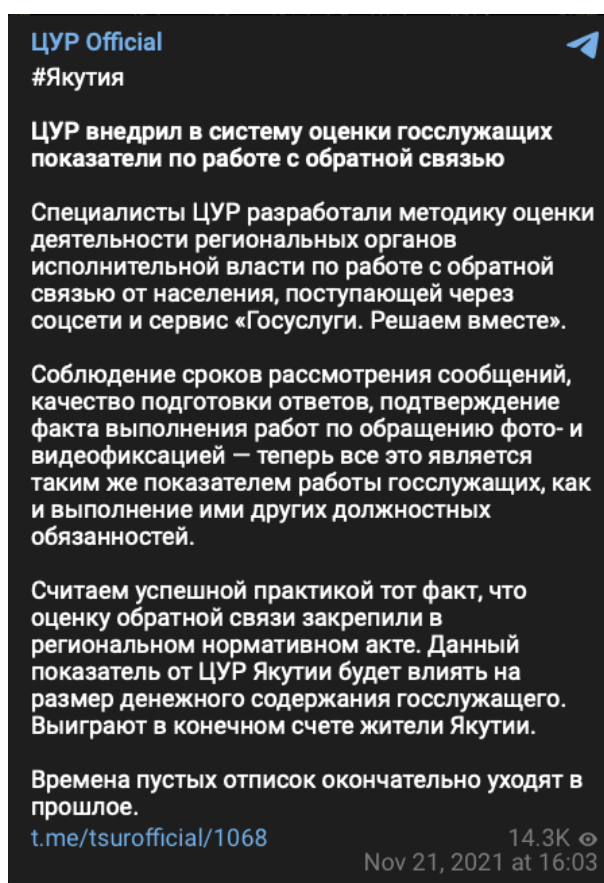
Regional Governance Center specialists have developed a methodology

for assessing the activities of regional executive authorities in working with feedback from the population received through social networks and the “Government Services. Let's decide together.”

Compliance with the deadlines for consideration of messages, the quality of preparation of responses, confirmation of the completion of work on the appeal by photo and video recording - now all this is the same indicator of the work of civil servants as the performance of other official duties.

We consider it a good practice that feedback assessment has been enshrined in regional regulations. This indicator from the Regional Governance Center of Yakutia will influence the amount of salary for a civil servant. Ultimately, the residents of Yakutia will win.

The times of empty replies are finally becoming a thing of the past.



Source: <https://t.me/tsurofficial/1068>

Appendix B. Robustness check of Hypothesis 1

Table B1. Quasi-Poisson model for mentions in Unofficial TG channel
(Robustness check when Constitution Referendum results are the main variable of interest)

	Dependent variable:	
	Mentions by Unofficial TG channel	
2020 Referendum, <i>yes</i> voters	-0.015 (0.010)	-0.018** (0.008)
Gross Regional Product, <i>logged</i>	0.075 (0.120)	0.143 (0.115)
Share from the Russian population, <i>logged</i>	0.210 (0.129)	0.222* (0.122)
Rural Population	0.003 (0.008)	0.003 (0.007)
Intercept	3.232*** (1.096)	3.044*** (1.067)
Fixed Effects, <i>Federal Districts</i>	<i>Included</i>	<i>No FE</i>
Observations	81	81
AIC	648.91.2	660.28
Dispersion	4.275	4.245

Standard error for a quasi-poisson model are in parentheses

*p<0.1; **p<0.05; ***p<0.01

Table B2. Quasi-Poisson model for mentions in Official TG channel
(Robustness check when Constitution Referendum results are the main variable of interest)

	Dependent variable:	
	Mentions by Official TG channel	
2020 Referendum, <i>yes</i> voters	-0.010 (0.008)	-0.005 (0.007)
Gross Regional Product, <i>logged</i>	0.294*** (0.093)	0.242*** (0.086)
Share from the Russian population, <i>logged</i>	-0.128 (0.095)	-0.035 (0.089)
Rural Population	-0.0007 (0.006)	0.002 (0.006)
Intercept	1.678* (0.869)	1.826** (0.812)
Fixed Effects, <i>Federal Districts</i>	<i>Included</i>	<i>No FE</i>

Observations	81	81
AIC	711.82	733.34
Dispersion	4.473	4.699
Standard error for a quasi-poisson model are in parentheses	*p<0.1; **p<0.05; ***p<0.01	

Table B3. Quasi-Poisson model for mentions in Unofficial TG channel (Robustness check when United Russia Results, 2021)

	Dependent variable:	
	Mentions by Unofficial TG channel	
United Russia Results in 2021	-0.004 (0.006)	-0.006 (0.005)
Gross Regional Product, <i>logged</i>	0.073 (0.123)	0.152 (0.115)
Share from the Russian population, <i>logged</i>	0.181 (0.132)	0.167 (0.120)
Rural Population	0.001 (0.008)	-0.00004 (0.007)
Intercept	2.400** (0.938)	1.943** (0.891)
Fixed Effects, <i>Federal Districts</i>	<i>Included</i>	<i>No FE</i>
Observations	81	81
AIC	656.78	673.81
Dispersion	4.413	4.445
Standard error for a quasi-poisson model are in parentheses	*p<0.1; **p<0.05; ***p<0.01	

Table B4. Quasi-Poisson model for mentions in Official TG channel (Robustness check when United Russia Results, 2021)

	Dependent variable:	
	Mentions by Official TG channel	
United Russia Results in 2021	-0.008 (0.005)	-0.003 (0.004)

Gross Regional Product, <i>logged</i>	0.312*** (0.093)	0.243*** (0.086)
Share from the Russian population, <i>logged</i>	-0.161* (0.093)	-0.046 (0.086)
Rural Population	-0.001 (0.006)	0.002 (0.006)
Intercept	1.146 (0.692)	1.561** (0.676)
Fixed Effects, <i>Federal Districts</i>	<i>Included</i>	<i>No FE</i>
Observations	81	81
AIC	707.16	733.26
Dispersion	4.443	4.693
Standard error for a quasi-poisson model are in parentheses	*p<0.1; **p<0.05; ***p<0.01	

Table B5. Quasi-Poisson model for mentions in Unofficial TG channel (Robustness check when United Russia Results, 2016)

	Dependent variable:	
	Mentions by Unofficial TG channel	
United Russia Results in 2016	-0.013* (0.007)	-0.013** (0.006)
Gross Regional Product, <i>logged</i>	0.130 (0.124)	0.179* (0.114)
Share from the Russian population, <i>logged</i>	0.130 (0.132)	0.154 (0.117)
Rural Population	0.004 (0.008)	0.004 (0.007)
Intercept	2.324** (0.917)	2.017** (0.874)
Fixed Effects, Federal Districts	<i>Included</i>	<i>No FE</i>
Observations	81	81
AIC	642.25	656.74
Dispersion	4.194	4.165
Standard error for a quasi-poisson model are in parentheses	*p<0.1; **p<0.05; ***p<0.01	

Table B6. Quasi-Poisson model for mentions in Official TG channel
(Robustness check when United Russia Results, 2016)

	Dependent variable:	
	Mentions by Official TG channel	
United Russia Results in 2016	-0.010* (0.005)	-0.003 (0.004)
Gross Regional Product, <i>logged</i>	0.342*** (0.096)	0.252*** (0.087)
Share from the Russian population, <i>logged</i>	-0.195* (0.095)	-0.055 (0.085)
Rural Population	0.0005 (0.006)	0.002 (0.006)
Intercept	1.022 (0.705)	1.522** (0.672)
Fixed Effects, <i>Federal Districts</i>	<i>Included</i>	<i>No FE</i>
Observations	81	81
AIC	702.17	733.52
Dispersion	4.377	4.713
Standard error for a quasi-poisson model are in parentheses	*p<0.1; **p<0.05; ***p<0.01	

Appendix C. The Demand Side of the Activities carried out by Regional Governance Centers

To analyze the demand side of the activities carried out by the Regional Governance Centers, first, I applied structural topic modeling (STM) (Roberts, Stewart, & Tingley, 2019) to messages posted in the Telegram channels operated by these project management offices. STM allows an analyst to include control variables to estimate corresponding topical content and topical prevalence. Topical content pertains to the likelihood of specific words appearing within a given topic, while topic prevalence signifies the ratio of topics in individual documents within a corpus. For this STM model, I used the region that the Telegram channel represents as a covariate.

Topic modeling required conducting text pre-processing steps such as tokenization, conversion to lowercase, deletion of punctuation, stopwords⁷⁰, special characters, emojis, and numbers. Then, all the words were lemmatized, i.e., converted to their base form since, for the Russian language, lemmatization is more efficient for the performance of topic models than stemming (removal of the word ending) (May, Cotterell, & Durme, 2016). To do so, I exploited the MyStem program created by Yandex⁷¹. I removed words that appear in fewer than one document (`lower.thresh` parameter of the `prepDocuments` command in the STM package), but I did not specify the upper bound because the list of stopwords⁷² is quite extensive ($n=563$). Then, I did not sample the corpus but analyzed all the available Telegram messages due to available computational capacities. Structural topic modeling was implemented for channels operated by Regional Governance Centers (80 regions).

One of the challenges commonly encountered in topic modeling is determining the number of topics for the model (*k-value*). The aim of choosing a *k-value* is to yield topics which are both semantically meaningful and distinguishable from one another. I follow the iterative approach implemented by Michael Bossetta and Bonacci (2023) and based on suggestions made by

⁷⁰ The source of Russian stopwords is the following:

<https://raw.githubusercontent.com/stopwords-iso/stopwords-ru/master/stopwords-ru.txt>

⁷¹ <https://yandex.ru/dev/mystem/>

⁷² <https://raw.githubusercontent.com/stopwords-iso/stopwords-ru/master/stopwords-ru.txt>

other researchers (Roberts et al., 2019; Moran Yarchi & Kligler-Vilenchik, 2021) to detect an appropriate number of topics. I exploited the searchK function from the STM package (Roberts et al., 2019) to generate a set of models with diagnostics parameters. Specifically, I orient on the balance between semantic coherence and exclusivity. Semantic coherence evaluates the frequency with which the most defining words of a topic co-occur. Exclusivity examines whether words in a topic are unique to that topic or are distributed across multiple topics. These metrics are instrumental in arriving at a topic model with interpretable topics that are clearly delineated from one another.

For the model targeting two Telegram channels operated by the Dialog organization, I first chose the interval of 10 within the range of 10 and 100 (Figure [C1](#)). Subsequently, I narrowed the spectrum, focusing on the range of 10 and 30 (both values included) with the interval of 2 (Figure [C2](#)). Finally, I checked the interval between 15 and 20 (both included). Figure [C3](#) suggests that the most favorable balance between semantic coherence and exclusivity is provided when k -values is equal to 13.

Table [C1](#) (for the highest probability words) and Table [C2](#) (words with the highest frex score) present the results. Automated methods for determining the number of topics are auxiliary, serving as a guide for interpretation by a researcher. Therefore, I also provided examples of the posts illustrating topics.

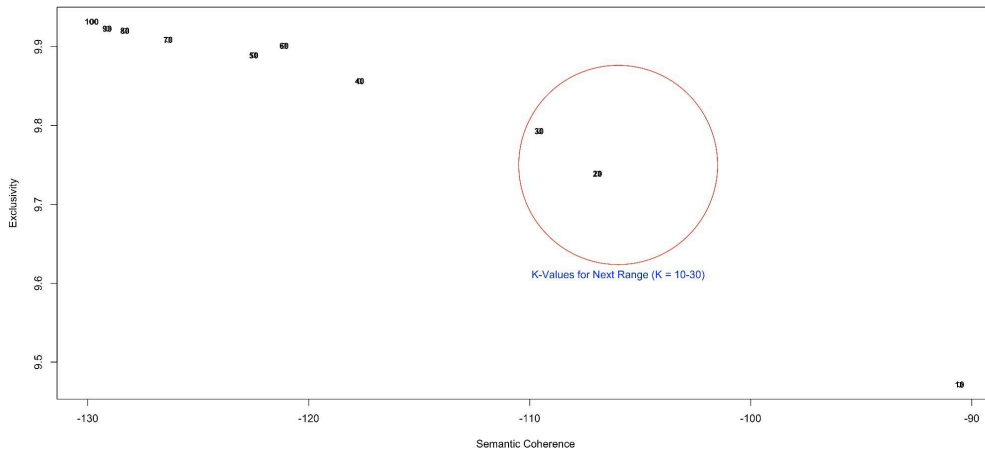


Figure C1. SearchK Topic Comparison for Broad Range of 10-100 Topics with interval = 10, Telegram channels operated by Regional Governance Centers

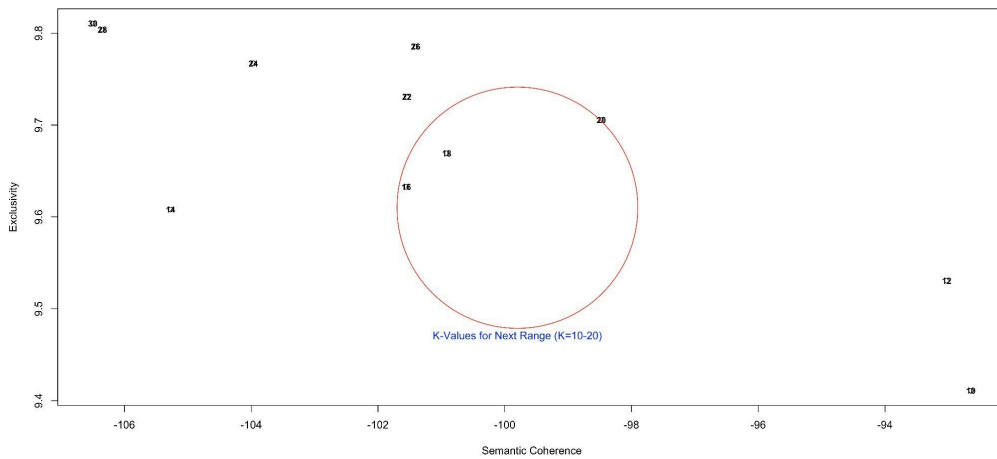


Figure C2. SearchK Topic Comparison for Broad Range of 10-30 Topics with interval = 2, Telegram channels operated by Regional Governance Centers

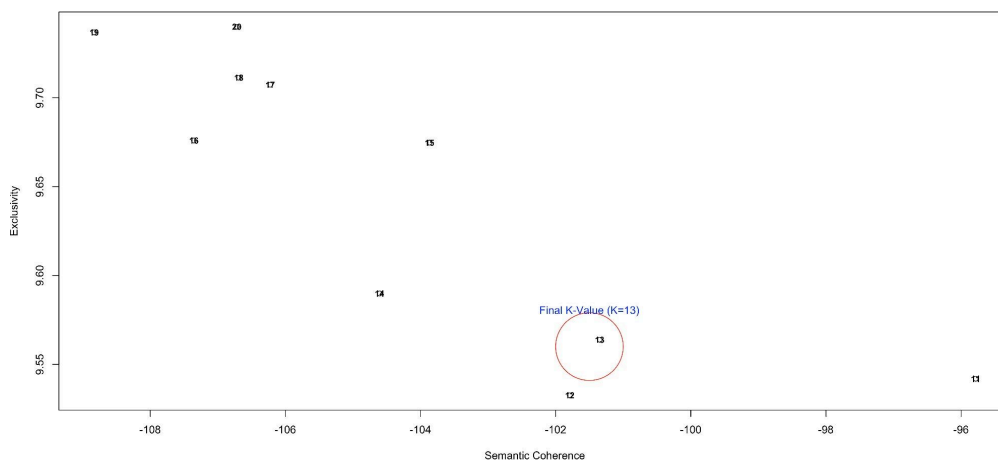


Figure C3. SearchK Topic Comparison for Broad Range of 15-20 Topics, Telegram channels operated by Regional Governance Centers

Table C1. Summary of STM for the regional Telegram channels, 13 topics (region as covariate), focus on the highest probability words

Topic (Label)	Highest Probability Words	Translation to English	Share ⁷³
1 (Live Q&A)	эфир, прямой, область, отвечать, глава, вконтакте, район	broadcast, live, region, answer, head, VKontakte, district	11%
2 (Refuting fakes)	проект, объект, район, территория, строительство, ремонт, программа	project, object, district, territory, construction, repair, program	7%
3 (Public Holidays and Memorable Days)	вакцинация, праздник, врач, минздрав, медицинский, поздравлять, проходить	vaccination, holiday, doctor, ministry of health, medical, congratulate, pass	7%
4 (Ways to Communicate with Authorities)	власть, орган, официальный, страница, бот, чат, регион	power, authority, official, page, bot, chat, region	5%
5 (Social Assistance Programs (Financial Benefits))	получать, выплата, семья, социальный, поддержка, рубль, пособие	receive, payment, family, social, support, ruble, allowance	8%

⁷³ The sum is more than 100 percent due to the rounding.

6 (Non-Commercial Organization Dialog)	диалог, регион, ано, интернет, цифровой, фейк, коммуникация	Dialog [organization], region, ANO [Autonomous Non-Commercial Organization, legal status], internet, digital, fake, communication	8%
7 (Useful Information for Citizens)	карточка, карта, правило, информация, область, рассказывать, безопасность	card, map, rule, information, area, tell, security	8%
8 (Citizens Appeals and Solved Problems)	житель, администрация, проблема, специалист, решать, зафиксировать, передавать	resident, administration, problem, specialist, solve, record, transfer	10%
9 (Easy Ways to Communicate with Authorities)	помогать, рассказывать, проблема, житель, ответ, получать, опрос	help, tell, problem, resident, answer, receive, survey	6%
10 (Solving Problems)	обращение, сообщение, житель, тема, неделя, регион, область	appeal, message, resident, topic, week, region, oblast [region]	15%
11 (Communal Services, Urban Beautification, etc.)	мусор, район, обращение, администрация, житель, площадка, участок	garbage, area, circulation, administration, resident, site, area	7%
12 (Incidents (fires, floods))	башкортостан, республика, район, уфа, коллега, пожар, глава	Bashkortostan, republic, district, Ufa, colleague, fire, head	3%
13 (School and Education)	школа, центр, образование, регион, руководитель, проводить, адыгея	school, center, education, region, leader, conduct, Adygea	7%

Table C2. Summary of STM for the regional Telegram channels, 13 topics (region as covariate), focus on the words with highest frex scores

Topic	Frex Words	Translation to English	Share ⁷⁴
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⁷⁴ The sum is more than 100 percent due to the rounding.

(Label)			
1 (Live Q&A)	трансляция, анонс, хинштейн, пурга, поговорить, каверзный, хабаровский	broadcast, announcement, Khinshtein, blizzard, talk, tricky, Khabarovsk	11%
2 (Refuting fakes)	мойка, метеорит, преображаться, усадьба, повсюду, богданович, истина	Car wash, meteorite, transform, estate, everywhere, Bogdanovich, truth	7%
3 (Public Holidays and Memorable Days)	желать, прививка, вакцина, пациент, полк, бессмертный, пусть	wish, vaccination, vaccine, patient, regiment, immortal, let	7%
4 (Ways to Communicate with Authorities)	яндекс, бот, ведение, интервью, администратор, чат, аудитория	Yandex, bot, conducting, interview, administrator, chat, audience	5%
5 (Social Assistance Programs (Financial Benefits))	пособие, доход, пенсия, многодетный, компенсация, льготный, минимум	allowance, income, pension, large family, compensation, preferential, minimum	8%
6 (Non-Commercial Organization Dialog)	управленческий, трансформация, мгу, недостоверный, ася, обучать, семинар	managerial, transformation, Moscow State University, unreliable, Asya, teach, seminar	8%
7 (Useful Information for Citizens)	банк, лагерь, клещ, памятка, учетный, код, обманывать	bank, camp, tick, memo, accounting, code, deceive	8%
8 (Citizens Appeals and Solved Problems)	остановка, светофор, пешеход, сыктывкар, разметка, остановочный, столб	stop, traffic light, pedestrian, Syktyvkar, markings, stop, pole	10%
9 (Easy Ways to Communicate with Authorities)	крым, полуостров, якутия, крымчанин, симферополь, хакасия, перепись	Crimea, peninsula, Yakutia, Crimean, Simferopol, Khakassia, census	6%
10 (Solving Problems)	жкх, неделя, обрабатывать, волновать, поступать, прошедший, сообщение	housing and communal services, week, process, worry, act, past, message	15%

11 (Communal Services, Urban Beautifucation, etc.)	свалка, контейнерный, отходы, контейнер, несанкционированный, канализационный, незамеченный	landfill, container, waste, container, unauthorized, sewer, unnoticed	7%
12 (Incidents (fires, floods))	башкортостан, уфа, пожар, радий, башкирский, уфимский, хабир[ов]	Bashkortostan, Ufa, fire, Radiy, Bashkir, [of] Ufa, Khabir[ov]	3%
13 (School and Education)	учебный, бездомный, учитель, педагогический, дошкольный, школа, томский	educational, homeless, teacher, pedagogical, preschool, school, Tomsk	7%

Examples of posts illustrating topics

Topic 1 (Live Q&A of officials):

On Thursday, February 9, there will be a live broadcast with the head of the Department of Agriculture and Food of the Chukotka Autonomous Okrug Sergei Davidyuk.

We will discuss current issues of reindeer husbandry and marine mammal hunting.

Join the broadcast on the waves of Radio “Purga” [Blizzard], in the Department's VK account and in the LRC Telegram channel.


vk.com/depshp_chukotka

t.me/tsur87

Starts immediately after the news release at 15:00

Questions can be asked now on the Telegram channel of Radio “Purga” [Blizzard] at +7 (924) 7892222 (marked as a question for the live broadcast) and in the comments at the link t.me/tsur87/240

ЦУР Чукотки



0:14

📢 В четверг, 9 февраля, состоится прямой эфир с начальником Департамента сельского хозяйства и продовольствия Чукотского АО Сергеем Давидюком.

Обсудим актуальные вопросы оленеводства и морзверобойного промысла.

▶ Присоединяйтесь к эфиру на волнах Радио «Пурга», в аккаунте ВК Департамента и в Телеграм-канале ЦУР.

vk.com/depshp_chukotka

t.me/tsur87

📅 Начало сразу после выпуска новостей в 15:00

? Вопросы можно задать уже сейчас в Telegram канале Радио «Пурга» по номеру +7(924)7892222 (с пометкой вопрос к прямому эфиру) и в комментариях по ссылке t.me/tsur87/240

t.me/tsur87/240 2.3K 👁 edited Feb 7 at 01:40

Source: <https://t.me/tsur87/240>

Topic 2 (Refuting fakes):

Digital passport, Sverdlovsk meteorite and fine for car washing

Top 3 most common fakes of the past week

From April 10 to April 16, Noodle Media analysts identified 87 unique fakes, which received 104.5 million views.

Account on “Government Services” will be equal to a paper passport (11.3 million views). The Ministry of Digital Development denied this and stated that digital versions of documents on State Services will not replace

paper passports.

A small meteorite fell in the Sverdlovsk region (9.1 million views). The fake was denied by the regional Ministry of Emergency Situations and the mayor's office of the city of Bogdanovich. And journalists found out that the story could have been staged by bloggers for Cosmonautics Day.

Russians will be fined for washing and repairing cars at their summer cottage (7.2 million views). In fact, there is no such fine. You can only get money if you contaminate the soil or groundwater on your own site.

How did they lie to us?

Odnoklassniki - 36.8%

Telegram - 22.2%

VK—19.0%

Media - 13.2%

ЦУР Астраханской области
Forwarded from Лапша Медиа



Цифровой паспорт, свердловский метеорит и штраф за мойку машин
Топ-3 самых распространенных фейков прошлой недели

С 10 по 16 апреля аналитики «Лапша Медиа» выявили 87 уникальных фейков, которые набрали 104,5 млн просмотров.

Аккаунт на «Госуслугах» приравняют к бумажному паспорту
11,3 млн просмотров
В Минцифры **опровергли** это и заявили, что цифровые версии документов на «Госуслугах» не заменят бумажные паспорта.

В Свердловской области упал небольшой метеорит
9,1 млн просмотров
Фейк **опровергли** в региональном МЧС и мэрии города Богданович. А журналисты выяснили, что история могла быть постановкой блогеров ко Дню космонавтики.

Россиян будут штрафовать за мойку и ремонт авто на дачном участке
7,2 млн просмотров
На самом деле такого **штрафа нет**. Попасть на деньги можно только если загрязнить почву или грунтовые воды на собственном участке.

С помощью чего нам врал?
Одноклассники — 36,8%
Telegram — 22,2%
VK—19,0%
СМИ — 13,2%

t.me/tsur30/775 134 Apr 18 at 12:13

Source: <https://t.me/tsur30/775>

Topic 3 (Public Holidays and Memorable Days):

June 20 is Medical Worker Day!

Today, people of the most humane profession - medical workers - celebrate their professional holiday.

In this difficult time, with your heroism you are protecting the greatest values given to people - life and health. Your work for the benefit of people is an everyday feat worthy of respect.

The Regional Management Center congratulates all medical workers in Kabardino-Balkaria. Thank you for your dedication, sensitivity and kindness!

We wish you good health, success and prosperity!



Source: https://t.me/tsur_07/385

Topic 4 (Ways to Communicate with Authorities):

Media reality 2022: new recommendations for authorities on working in social media

First Deputy General Director of ANO Dialog Regions Kirill Istomin, in an interview with URA.RU, spoke about changes in media consumption in Russia due to the blocking of a number of foreign social media platforms, as well as new requirements for authorities to work in social media.

We have collected for you the most interesting moments from the interview, read the full version at the link.

- Instagram* continues to lose audience

According to Brand Analytics, by the end of April, 56% of users had reduced their activity on Instagram*. The decrease in content on the social network occurred by 31%.

- Growth of VK and Telegram; revival of Odnoklassniki

VK's growth is more than 4 million daily audience, and the share of active authors has increased by 22%. Telegram is growing just as strongly: in March, Russian Telegram channels added a total of 40 million new subscribers. As for Odnoklassniki: the number of restored old accounts increased by a third, the rate of new registrations increased by one and a half times.

- How is TikTok doing?

Despite the fact that there is actually no new Russian content there, the TikTok audience did not fall in April. Most likely, TikTok will return to the country after finalizing its algorithms to meet the requirements of Russian legislation and after that will begin to absorb the audience leaving Instagram*.

- New recommendations for authorities on working in social media

The main traffic from blocked social networks goes to VK and Telegram, so today we recommend that authorities use these two platforms for their work.

Almost everyone follows this: we see that more than 70 governors have opened pages in Telegram and VK. The third social media platform, Odnoklassniki, is recommended as an option. Also, authorities will have to work with TikTok in the future.

- How will the success of the work of governors and mayors on social media platforms be assessed?

In terms of the quality of maintaining public pages and personal pages (for example, there is a recommendation to use more videos and less text), the number of subscribers and the coverage of publications (for each region, the specifics and size of the Internet audience are taken into account), and the speed and quality of responses to citizens' requests.

High-quality informative accounts are the basis of feedback. For example, back in 2020, we recorded that citizens' appeals came from the pages of government authorities only in 5% of cases. And now there are already 40% of such requests.

* the social media platform is recognized as extremist and banned in the Russian Federation

ЦУР Приморского края
Forwarded from ДИАЛОГ

Медиареальность-2022: новые рекомендации
для органов власти по работе в соцсетях

Первый замгендиректора АНО «Диалог Регионы» Кирилл Истомина в интервью URA.RU рассказал об изменениях медиапотребления в России в связи с блокировкой ряда иностранных соцсетей, а также о новых требованиях к органам власти по работе в соцсетях.

Собрали для вас самые интересные моменты из интервью, полную версию читайте по [ссылке](#).

– Instagram* продолжает терять аудиторию

По данным Brand Analytics, уже на конец апреля 56% пользователей снизили активность в Instagram*. Уменьшение контента в соцсети произошло на 31%.

– Рост ВК и Telegram; возрождение «Одноклассников»

Прирост у ВК – более 4 млн ежедневной аудитории, а доля активных авторов увеличилась на 22%. Telegram растет так же сильно: за март в российские телеграм-каналы суммарно добавились 40 млн новых подписчиков. Что касается «Одноклассников»: количество восстановленных старых аккаунтов выросло на треть, темп новых регистраций – в полтора раза.

– Как дела у TikTok?

Несмотря на то, что фактически нового российского контента там нет, аудитория TikTok в апреле не падала. Скорее всего, TikTok вернется в страну после доработки своих алгоритмов под требования законодательства РФ и после этого начнет забирать в себя уходящую из Instagram* аудиторию.

– Новые рекомендации органам власти по работе в соцсетях

Основной трафик с заблокированных соцсетей переходит в ВК и Telegram, поэтому сегодня мы рекомендуем органам власти в обязательном порядке использовать для работы эти две площадки.

Практически все этому следуют: мы видим, что более 70 губернаторов открыли страницы в «телеге» и ВК. Третья соцсеть – «Одноклассники» – рекомендована в факультативном порядке. Также органам власти в будущем придется работать с TikTok.

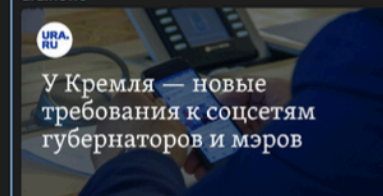
– Как будет оцениваться успешность работы губернаторов, мэров в соцсетях?

По качеству ведения пабликов и личных страниц (например, есть рекомендация использовать больше видео и меньше текста), числу подписчиков и охвату публикаций (в отношении каждого региона при этом учитывается специфика, размер интернет-аудитории), по скорости и качеству ответов на обращения граждан.

Качественные информативные аккаунты – основа обратной связи. Например, еще в 2020 году мы фиксировали, что обращения граждан приходят со страниц органов власти только в 5% случаев. А сейчас таких обращений уже 40%.

* соцсеть признана экстремистской и запрещена в РФ

ura.news



У Кремля — новые требования к соцсетям губернаторов и мэров
Меньше текста, больше видео — пока не вернулся TikTok

t.me/tsur25/925 388 May 6, 2022 at 12:39

Source: <https://t.me/tsur25/925>

Topic 5 (Social Assistance Programs (Financial Benefits)):

Regional Governance Center informs

In the Vladimir region, a single monthly allowance was approved for 22,000 children in two months. This type of state support is individual: 50, 75 or 100% of the cost of living in the region (13,944 rubles). It is prescribed to low-income families and pregnant women.

From January 1, 2023, the Unified Benefit combined a number of existing social payments:


- monthly allowance for women registered in the early stages of pregnancy
- child care benefits for unemployed citizens
- monthly payment in connection with the birth (adoption) of the first child under 3 years of age
- monthly payment at the birth of the third or subsequent children under 3 years of age
- monthly payment for a child aged 3 to 7 years
- monthly payment for a child aged 8 to 17 years

Families have the right to choose which benefits to remain on – those already issued or switch to universal ones.

An application can be submitted:

- through the public services portal
- through Multifunctional Centers
- in person at the Social Insurance Fund of the Vladimir Region

ЦУР Владимирской области



Центр
Управления
Регионом
Владимирская область

245 миллионов рублей перечислено семьям региона в виде Единого ежемесячного пособия

ЦУР информирует

Во Владимирской области за два месяца Единое ежемесячное пособие одобрили на 22 000 детей. Такой вид господдержки – индивидуальный: 50, 75 или 100% от прожиточного минимума по региону (13 944 рубля). Он назначается малоимущим семьям и беременным женщинам.

С 1 января 2023 года Единое пособие объединило ряд действующих соцвыплат:

- ✓ ежемесячное пособие женщинам, вставшим на учет в ранние сроки беременности
- ✓ пособие по уходу за ребенком неработающим гражданам
- ✓ ежемесячную выплату в связи с рождением (усыновлением) первого ребенка до 3 лет
- ✓ ежемесячную выплату при рождении третьего или последующих детей до 3 лет
- ✓ ежемесячную выплату на ребенка в возрасте от 3 до 7 лет
- ✓ ежемесячную выплату на ребенка в возрасте от 8 до 17 лет

У семей есть право выбора, на каком пособии остаться – на уже оформленных или перейти на универсальное.

Заявление можно подать:

- через портал госуслуг
- через МФЦ
- лично в Социальном страховом фонде Владимирской области

t.me/tsur33/956 198 Mar 3 at 09:02

Source: <https://t.me/tsur33/956>

Topic 6 (Non-Commercial Organization Dialog)

“Dialog” will train civil servants in cybersecurity

The training course will be held as part of the all-Russian cyber education program, which the Russian Ministry of Digital Development launched jointly with ANO Dialog Regions, St. Petersburg State University of Technology and RTK-Solar.

A separate block of the large-scale program will be devoted to training government officials in cyber security. This year alone, about 150 thousand federal and regional civil servants throughout Russia will take it.

ANO “Dialog Regions” will organize a course on a specialized online platform, where it will tell officials about the nature of cyber threats and teach them:

- create strong passwords with the help of special services and managers;
- distinguish phishing emails and avoid hacker tricks;
- use additional protection tools;
- avoid data leaks and cyber threats at any stage of online work.

The average time to complete the course is 4.5 academic hours. Start in September.

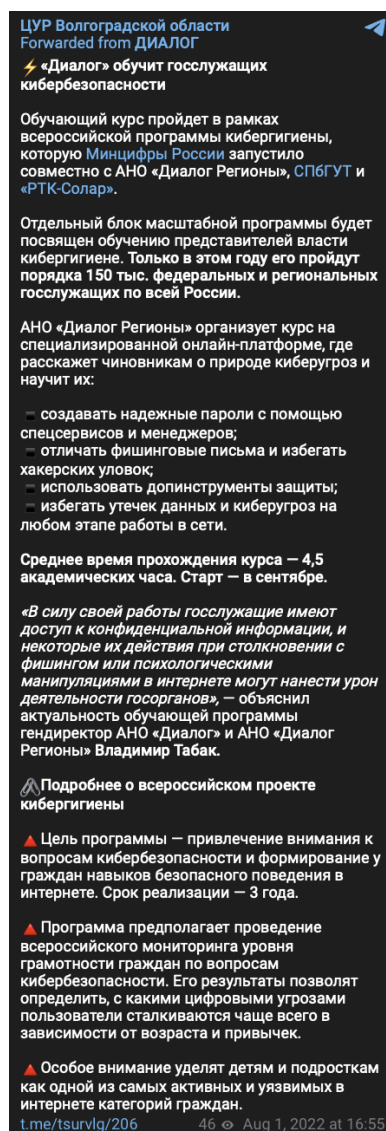
“Due to their work, civil servants have access to confidential information, and some of their actions when faced with phishing or psychological manipulation on the Internet can cause damage to the activities of government agencies,” explained the relevance of the training program, Vladimir Tabak, CEO of ANO Dialog and ANO Dialog Regions.

More about the All-Russian cyber security project:

- The goal of the program is to draw attention to cybersecurity issues and develop citizens' skills for safe behavior on the Internet. Implementation period: 3 years.

- The program involves conducting all-Russian monitoring of the level of literacy of citizens on cybersecurity issues. Its results will allow us to determine which digital threats users encounter most often, depending on their age and habits.

- Particular attention will be paid to children and teenagers as one of the most active and vulnerable categories of citizens on the Internet



Source: <https://t.me/tsurvlg/206>

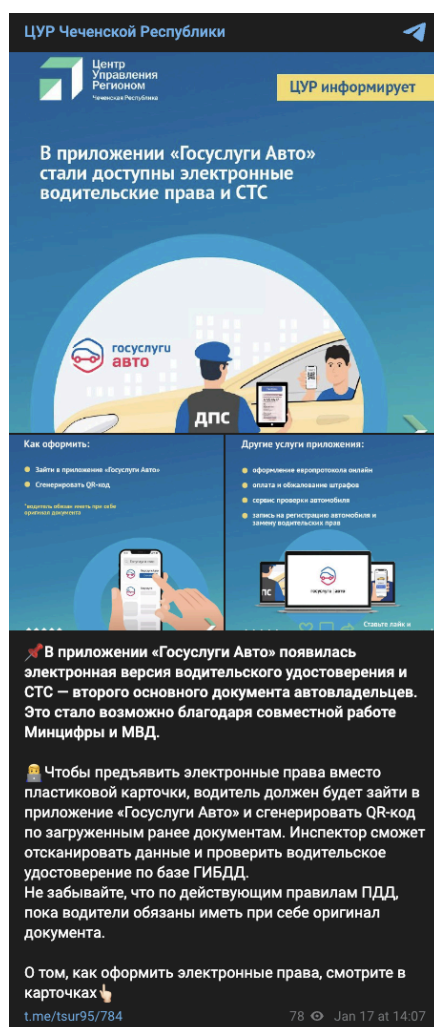
Topic 7 (Useful Information for Citizens):

An electronic version of the driver's license and STS, the second main document of car owners, has appeared in the “State Services Auto” application. This became possible thanks to the joint work of the Ministry of Digital Development and the Ministry of Internal Affairs.

To present an electronic license instead of a plastic card, the driver will have to go to the State Services Auto application and generate a QR code using the previously uploaded documents. The inspector will be able to scan the data and check the driver's license using the traffic police database.

Do not forget that according to the current traffic rules, drivers are still required to carry the original document with them.

For information on how to obtain electronic rights, see the cards



Source: <https://t.me/tsur95/784>

Topic 8 (Citizens Appeals and Solved Problems):

Staircases on one of the central streets were repaired in Syktyvkar

Residents published photos and videos on social networks showing the unsatisfactory condition of the stairs at the intersection of Pervomaiskaya and Ordzhonikidze streets. According to residents, it is impossible for people with disabilities or mothers with strollers to get down here. The Regional Governance Center of Komi quickly sent a signal to the city administration.

As a result, employees of the Road Management municipal company repaired the stairs: laid and secured new ramps, painted the railings, replaced sidewalk paving elements and tiles on the stairs themselves.

They also repaired the stairs on the descent from house No. 47 on Pervomaiskaya Street.

ЦУР Республики Коми

Центр
Управления
Регионом
Республика Коми

В Сыктывкаре отремонтировали лестницы по улице Первомайской

БЫЛО **СТАЛО**

← В Сыктывкаре отремонтировали лестницы на одной из центральных улиц

Горожане опубликовали в соцсетях фото и видео, где видно неудовлетворительное состояние лестницы на перекрёстке улиц Первомайской и Орджоникидзе. По словам жителей, здесь невозможно спуститься ни людям с ограниченными возможностями здоровья, ни мамам с колясками. ЦУР Коми оперативно передал сигнал в городскую администрацию.

✓ В итоге сотрудники МКП «Дорожное хозяйство» отремонтировали лестницу: уложили и закрепили новые пандусы, покрасили перила, заменили элементы мощения тротуара и плитку на самой лестнице.

✓ Также они отремонтировали лестницу на спуске от дома №47 по улице Первомайской.

#цур11помогает #цур11былостало
t.me/tsur_11/1203 142 Jul 16, 2021 at 09:48

Source: https://t.me/tsur_11/1203

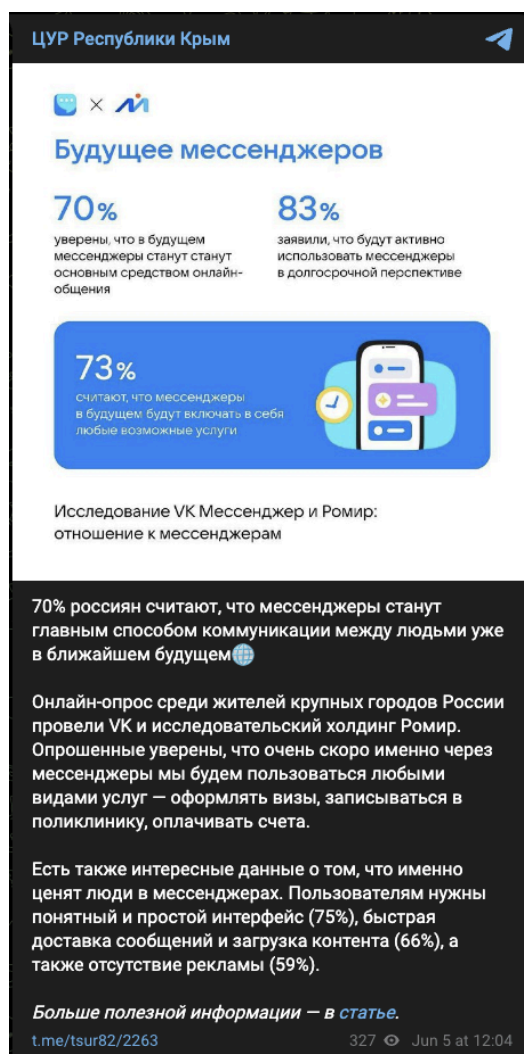
Topic 9 (Easy Ways to Communicate with Authorities):

70% of Russians believe that instant messengers will become the main way of communication between people in the near future.

An online survey among residents of large Russian cities was conducted by VK and the Romir research holding. Those surveyed are confident that very soon we will be using all kinds of services through messengers - applying for visas, making appointments at a clinic, paying bills.

There is also interesting data about what exactly people value in instant messengers. Users want a clear and simple interface (75%), fast message

delivery and content loading (66%), and the absence of advertising (59%).
More useful information in the article.



Source: <https://t.me/tsur82/2263>

Topic 10 (Solving Problems):

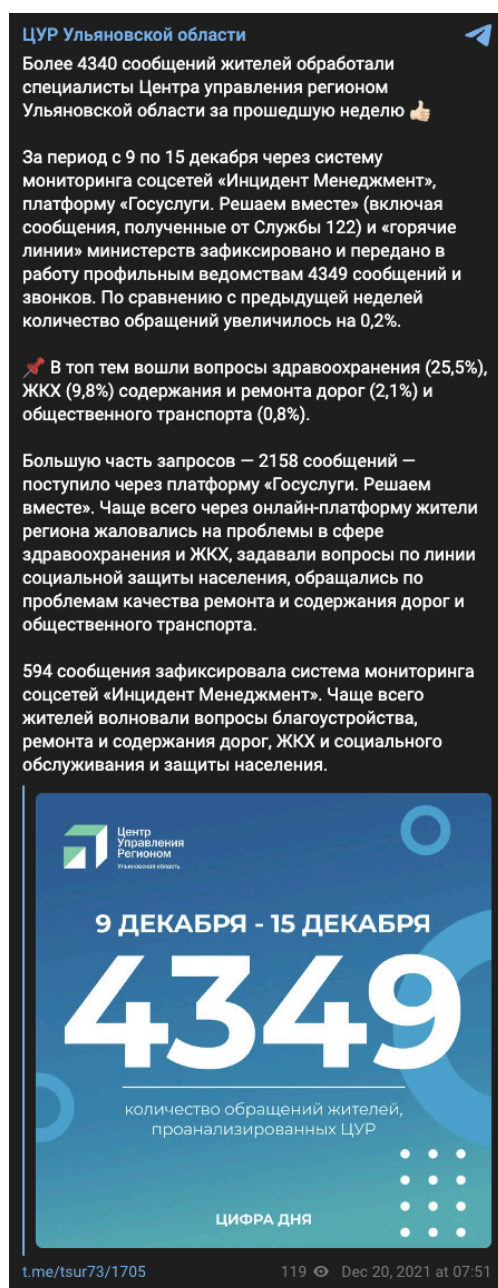
More than 4,340 messages from residents were processed by specialists from the Regional Management Center of the Ulyanovsk Region over the past week

For the period from December 9 to December 15, through the social network monitoring system “Incident Management”, the “Government Services” platform. Let's decide together” (including messages received from Service 122) and “hotlines” of ministries, 4,349 messages and calls were recorded and transferred to the relevant departments. Compared to the previous week, the number of requests increased by 0.2%.

The top topics included health care (25.5%), housing and communal services (9.8%), road maintenance and repair (2.1%) and public transport (0.8%).

The majority of requests - 2158 messages - were received through the Government Services platform. Let's decide together." Most often, through the online platform, residents of the region complained about problems in the field of healthcare and housing and communal services, asked questions regarding social protection of the population, and addressed problems with the quality of repairs and maintenance of roads and public transport.

594 messages were recorded by the Incident Management social network monitoring system. Most often, residents were concerned about issues of improvement, repair and maintenance of roads, housing and communal services and social services and protection of the population.



Source: <https://t.me/tsur73/1705>

Topic 11 (Communal Services, Urban Beautification, etc.):

#RegionalGovernanceCenter46_Informs

On June 29, repair work will be carried out on 15 road sections in Kursk.

Blagoustroistvo LLC will perform work in the following areas:

st. V. Lugovaya - preparation and laying of the road surface;

st. Perekalsky - preparation and laying of road surfaces.

Kursk DRSU LLC will carry out work on the streets:

st. Raspberry - installation of asphalt concrete pavement made of black crushed stone;

st. Pioneers - replacement of hatches.

CJSC “Sudzhansky DRSU No. 2” is working today at the following sites:

st. 1st Fatezhskaya - installation of side stones;

st. Zolotaya - device of a leveling layer of coating;

st. Kirov - installation of side stone;

st. Sadovaya - installation of a leveling layer of coating;

st. Postal - installation of side stones, installation of a leveling layer of coating.

Terra LLC will perform work in the following areas:

st. 1st Stroitel'naya - milling of asphalt concrete pavement;

st. K. Liebknecht - installation of side stone;

st. Kryukovka - laying asphalt concrete pavement;

st. Lomonosov - dismantling the side stone;

st. Mendeleev - removal of construction waste;

st. Shchepkina - installation of side stone.

ЦУР Курской области

#ЦУР46_Информирует

! 29 июня в Курске на 15 участках автодорог будут проводить ремонтные работы.

✓ ООО «Благоустройство» выполнит работы на участках:

- ◆ ул. В. Луговая - подготовка и укладка дорожного покрытия;
- ◆ ул. Перекальского - подготовка и укладка дорожного покрытия.

✓ ООО «Курское ДРСУ» проведёт работы на улицах:

- ◆ ул. Малиновая - устройство асфальтобетонного покрытия из черного щебня;
- ◆ ул. Пионеров - замена люков.

✓ ЗАО «Суджанское ДРСУ №2» сегодня работает на участках:

- ◆ ул. 1-я Фатежская - установка бортового камня;
- ◆ ул. Золотая - устройство выравнивающего слоя покрытия;
- ◆ ул. Кирова - установка бортового камня;
- ◆ ул. Садовая - устройство выравнивающего слоя покрытия;
- ◆ ул. Почтовая - установка бортового камня, устройство выравнивающего слоя покрытия.

✓ ООО «Терра» выполнит работы на участках:

- ◆ ул. 1-я Строительная - фрезерование асфальтобетонного покрытия;
- ◆ ул. К. Либкнехта - монтаж бортового камня;
- ◆ ул. Крюковка - укладка асфальтобетонного покрытия;
- ◆ ул. Ломоносова - демонтаж бортового камня;
- ◆ ул. Менделеева - вывоз строительного мусора;
- ◆ ул. Щепкина - монтаж бортового камня.



Source: <https://t.me/tsur46/2818>

Topic 12 (Incidents (fires, floods)):

A Ka-32 fire and rescue helicopter dropped 31 tons of water in the Kaltasinsky district. Rescuers continue to extinguish a natural fire 4-6 kilometers from the village. Kuyanovo, Krasnokamsk district - forest litter and reeds are on fire. The fire is extinguished from the ground and from the air. 93 people and 18 pieces of equipment are participating - a Ka-32 helicopter, bulldozers, 6 firefighting tankers. Volunteer fire brigades are working, and local residents are also actively helping. Yesterday late evening the fire was localized to an area of 20.3 hectares. The situation is under control, there is no threat to the populated area.

About this from the SDG of Bashkortostan in the inclusion in the live broadcast of the "Salyam" program - Pyotr Ilyin, Deputy Head of the Department of Supervision Activities and Preventive Work of the Main Directorate of the Ministry of Emergency Situations of Russia for the Republic of Bashkortostan.

Operational information for the morning of May 30 on fires:

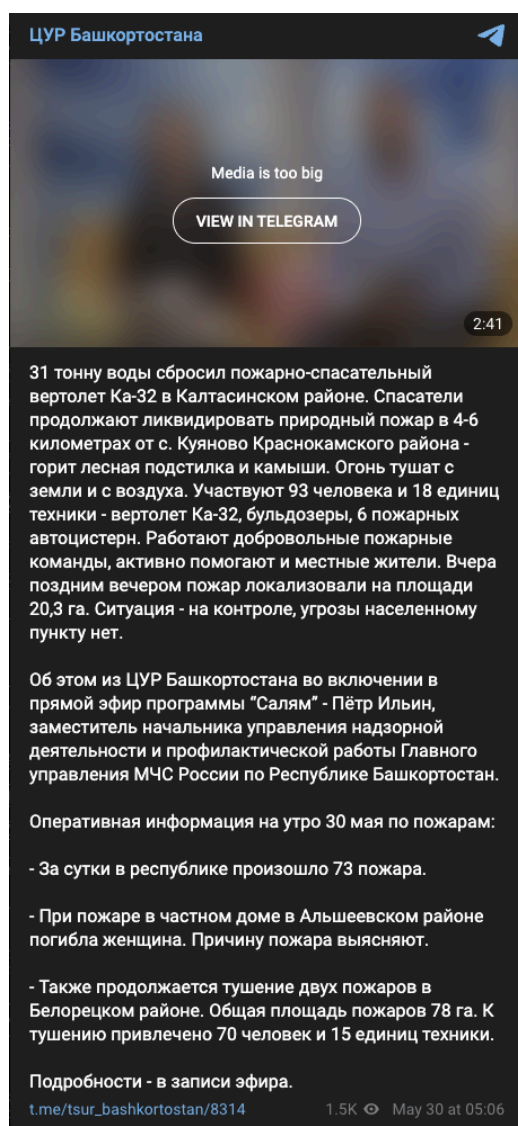
- During the day, 73 fires occurred in the republic.

- A woman died in a fire in a private house in the Alsheevsky district.

The cause of the fire is being investigated.

- The extinguishing of two fires in the Beloretsky district is also ongoing. The total area of fires is 78 hectares. 70 people and 15 pieces of equipment were involved in the fire extinguishing effort.

Details are in the recording of the broadcast.



Source: https://t.me/tsur_bashkortostan/8314

Topic 13 (School and Education):

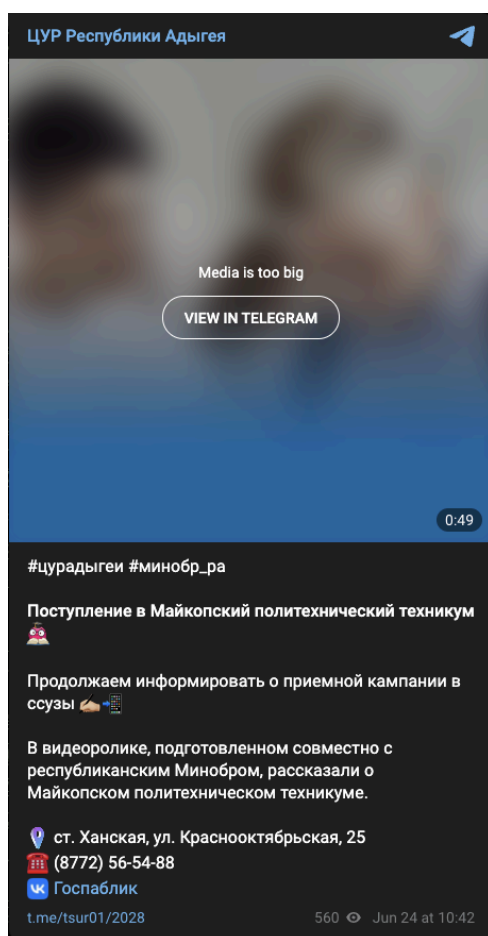
Admission to Maikop Polytechnic College

We continue to inform you about the admission campaign to colleges

In a video prepared jointly with the Republican Ministry of Education, they talked about the Maykop Polytechnic College.

Address: Art. Khanskaya, st. Krasnooktyabrskaya, 25

Phone: (8772) 56-54-88



Source: <https://t.me/tsur01/2028>

Appendix D. Regional Governance Centers as Mediators in Federal Center-Regions Interaction

To show that the Regional Governance Centers serve as mediators in Federal Center-Regions Interaction, I used structural topic modeling (STM) (Roberts, Stewart, & Tingley, 2019) analysis of messages posted by Telegram channels operated by Regional Governance Centers. STM allows an analyst to include control variables to estimate corresponding topical content and topical prevalence. Topical content pertains to the likelihood of specific words appearing within a given topic, while topic prevalence signifies the ratio of topics in individual documents within a corpus. Thus, as a covariate, I use the variable that indicates whether a message was initially produced by the regional channel or forwarded from other channels.

Topic modeling required conducting text pre-processing steps such as tokenization, conversion to lowercase, deletion of punctuation, stopwords⁷⁵, special characters, emojis, and numbers. Then, all the words were lemmatized, i.e., converted to their base form since, for the Russian language, lemmatization is more efficient for the performance of topic models than stemming (removal of the word ending) (May, Cotterell, & Durme, 2016). To do so, I exploited the MyStem program created by Yandex⁷⁶. I removed words that appear in fewer than one document (lower.thresh parameter of the prepDocuments command in the STM package), but I did not specify the upper bound because the list of stopwords⁷⁷ is quite extensive ($n=563$). Then, I did not sample the corpus but analyzed all the available Telegram messages due to available computational capacities. Structural topic modeling was implemented for Telegram channels operated by Regional Governance Centers (80 regions). One of the challenges commonly encountered in topic modeling is determining the number of topics for the model (k -value). The aim of choosing a k -value is to yield topics which are both semantically meaningful and distinguishable from one another. I follow the iterative approach implemented by Michael

⁷⁵ The source of Russian stopwords is the following:

<https://raw.githubusercontent.com/stopwords-iso/stopwords-ru/master/stopwords-ru.txt>

⁷⁶ <https://yandex.ru/dev/mystem/>

⁷⁷ <https://raw.githubusercontent.com/stopwords-iso/stopwords-ru/master/stopwords-ru.txt>

Bossetta and Bonacci (2023) and based on suggestions made by other researchers (Roberts et al., 2019; Moran Yarchi & Kligler-Vilenchik, 2021) to detect an appropriate number of topics. I exploited the searchK function from the STM package (Roberts et al., 2019) to generate a set of models with diagnostics parameters. Specifically, I orient on the balance between semantic coherence and exclusivity. Semantic coherence evaluates the frequency with which the most defining words of a topic co-occur. Exclusivity examines whether words in a topic are unique to that topic or are distributed across multiple topics. These metrics are instrumental in arriving at a topic model with interpretable topics that are clearly delineated from one another.

I first chose the interval of 10 within the range of 2 and 100 (Figure D1). Subsequently, I narrowed the spectrum, focusing on the range of 5 and 25 (both values included) (Figure D2). Finally, I checked the interval between 8 and 16 (both included). Figure D3 suggests that the most favorable balance between semantic coherence and exclusivity is provided when *k*-values is equal to 12.

Table D1 (for the highest probability words) and Table D2 (words with the highest frex score) present the results. Automated methods for determining the number of topics are auxiliary, serving as a guide for interpretation by a researcher. Therefore, I also provided examples of the posts illustrating topics.

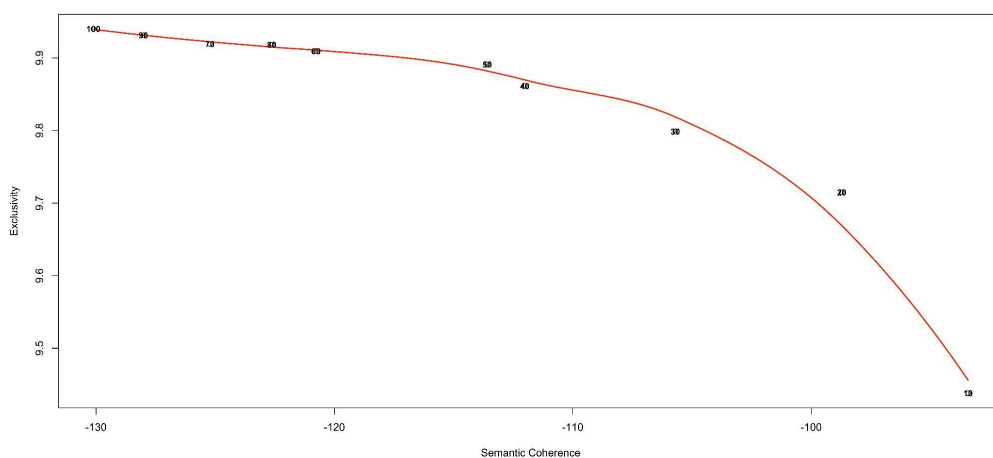


Figure D1. SearchK Topic Comparison for Broad Range of 10-100 Topics with interval = 10, Telegram channels operated by Regional Governance

Centers, forwarded status as a covariate

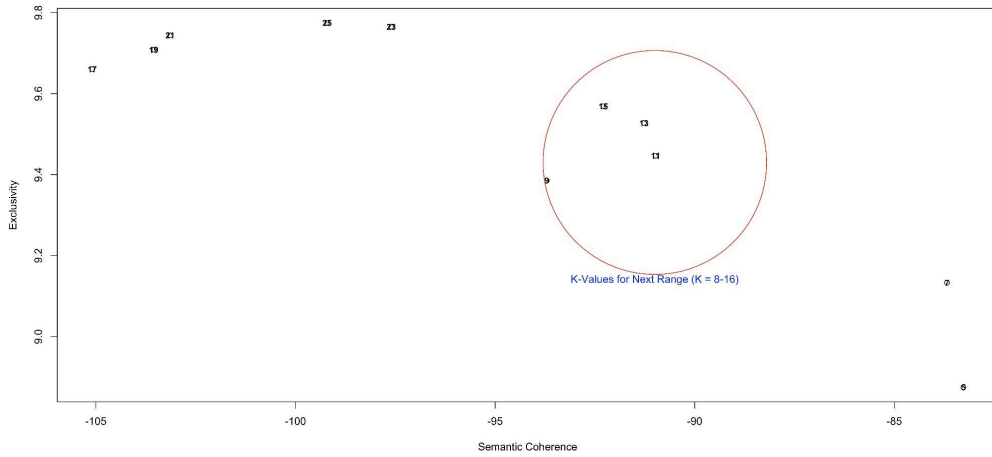


Figure D2. SearchK Topic Comparison for Broad Range of 5-25 Topics with interval = 2, Telegram channels operated by Regional Governance Centers, forwarded status as a covariate

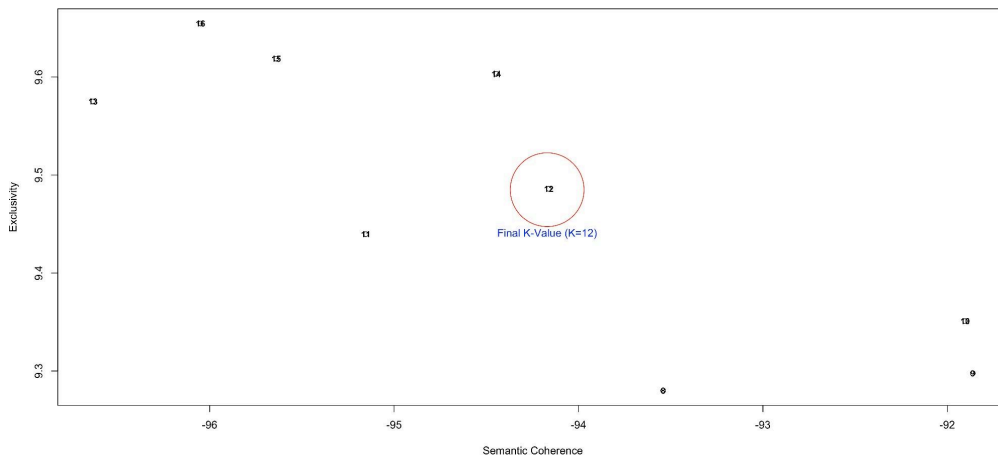


Figure D3. SearchK Topic Comparison for Broad Range of 8-16 Topics, Telegram channels operated by Regional Governance Centers, forwarded status as a covariate

Table D1. Summary of STM for the regional Telegram channels, 12 topics (the forwarded status of the message as covariate), focus on the highest probability words

Topic (Label)	Highest Probability Words	Translation to English	Share
1 (Live Q&A)	эфир, прямой, глава,	broadcast, live,	13%

	область, отвечать, регион, район	chapter, region, answer, region, district	
2 (Urban Beautification)	проект, территория, объект, культура, городской, программа, голосование	project, territory, object, culture, urban, program, voting	6%
3 (Public Holidays and Memorable Days)	вакцинация, врач, праздник, минздрав, медицинский, поздравлять, здоровье	vaccination, doctor, holiday, Ministry of Health, medical, congratulate, health	6%
4 (Ways to Communicate with Authorities)	власть, орган, официальный, страница, регион, бот, чат	power, authority, official, page, region, bot, chat	5%
5 (Social Assistance Programs (Financial Benefits))	выплата, получать, семья, социальный, поддержка, рубль, мера	payment, receive, family, social, support, ruble, measure	7%
6 (Non-Commercial Organization Dialog)	диалог, регион, ано, интернет, цифровой, фейк, управление	Dialog [non-commercial organization], region, Autonomous non-commercial organization [legal status], internet, digital, fake, control	7%
7 (Useful Information for Citizens)	карточка, информация, сайт, карта, получать, портал, рассказывать	card, information, website, map, receive, portal, tell	8%
8 (Citizens Appeals and Solved Problems)	ремонт, участок, район, дорожный, отремонтировать, снег, движение	repair, site, area, road, repair, snow, traffic	7%
9 (School and Education)	школа, образование, специалист, проводить, образовательный, участник, проходить	school, education, specialist, conduct, educational, participant, pass	7%
10 (Solving Problems)	обращение, житель, сообщение, тема, неделя, регион, область	appeal, resident, message, topic, week, region, region	15%
11 (Communal	проблема, администрация,	problem,	12%

Services and Renovation)	житель, обращение, передавать, решать, зафиксировать	administration, resident, appeal, transfer, solve, record	
12 (Incidents (fires, floods))	башкортостан, республика, район, уфа, безопасность, коллега, ситуация	Bashkortostan, republic, district, Ufa, security, colleague, situation	6%

Table D2. Summary of STM for the regional Telegram channels, 12 topics (the forwarded status of the message as covariate), focus on the words with highest frex scores

Topic (Label)	Frex Words	Translation to English	Share
1 (Live Q&A)	трансляция, анонс, хинштейн, прозвучать, пурга, цивилев, эфир	broadcast, announcement, [Member of the State Duma, national parliament] Khinshtein, sound, blizzard, [Governor of Kemerovo Oblast] Tsivilyov, broadcast	13%
2 (Urban Beautification)	спортивный, фестиваль, проголосовать, театр, соревнование, спортсмен, выставка	sports, festival, vote, theater, competition, athlete, exhibition	6%
3 (Public Holidays and Memorable Days)	праздник, минздрав, поздравлять, желать, прививка, вакцина, пациент	holiday, Ministry of Health, congratulate, wish, vaccination, vaccine, patient	6%
4 (Ways to Communicate with Authorities)	бот, яндекс, интервью, госучреждение, чат, аудитория, кью	bot, Yandex, interview, government agency, chat, audience, [Yandex] Que	5%
5 (Social Assistance Programs (Financial Benefits))	пособие, фонд, доход, пенсия, многодетный, компенсация, льготный	allowance, fund, income, pension, large family, compensation, preferential	7%
6 (Non-Commercial Organization Dialog)	управленческий, трансформация, мгу, недостоверный, ася, выборы, меморандум	managerial, transformation, Moscow State University, unreliable, Asya, elections, memorandum	7%

7 (Useful Information for Citizens)	банк, код, учетный, нажимать, карта, обманывать, лагерь	bank, code, accounting, press, card, deceive, camp	8%
8 (Citizens Appeals and Solved Problems)	автобус, мост, сыктывкар, ямочный, укладка, бортовой, разметка	bus, bridge, Syktyvkar, patchwork, laying, onboard, markings	7%
9 (School and Education)	студент, учебный, учитель, педагог, ученик, университет, колледж	student, educational, teacher, educator, student, university, college	7%
10 (Solving Problems)	жкх, обрабатывать, неделя, поступать, волновать, прошедший, содержание	housing and communal services, process, week, arrive, worry, past, content	15%
11 (Communal Services and Renovation)	свалка, пожаловаться, вывозить, контейнерный, отходы, контейнер, отреагировать	landfill, complain, remove, container, waste, container, react	12%
12 (Incidents (fires, floods))	башкортостан, уфа, пожар, включение, лес, радиий, лесной	Bashkortostan, Ufa, fire, inclusion, forest, Radiy [Khabirov], forest	6%

Examples of posts illustrating topics

Topic 1 (Live Q&A)

Live broadcast on legal issues!

Aleksey Preobrazhensky, Deputy Head of the Administration of the Governor of the Ulyanovsk Region - Head of the State Legal Department, will answer all relevant questions on the topic that are of interest to our subscribers on the air of the Regional Governance Center of the Ulyanovsk Region.

Watch the broadcast on July 19 at 11:00

You can ask your questions in the comments to the live broadcast on VKontakte and Odnoklassniki 👉



Source: <https://t.me/tsur73/3666>

Topic 2 (Urban Beautification)

Residents of the Dolinsky district will choose the best landscaping project

From April 26 to May 30, online voting will be held to select areas for improvement as part of the implementation of the federal project “Formation of a Comfortable Urban Environment.”

“We have prepared three large projects for Dolinsk. We strive to make the city beautiful and comfortable to live in. These two criteria can be difficult to combine, but the designers succeeded. I hope the residents support us,” said Alexander Tugarev.

Every citizen over 14 years of age will be able to take part in voting for improvement projects by casting their vote for their favorite project on the platform

ЦУР Сахалинской области
Forwarded from Правительство Сахалинско...

Жители Долинского района выберут лучший проект благоустройства территории

С 26 апреля по 30 мая пройдет онлайн-голосование по выбору территорий для благоустройства в рамках реализации федерального проекта «Формирование комфортной городской среды».

«Мы подготовили три больших проекта для Долинска. Мы стремимся к тому, чтобы город стал красивым и комфортным для жизни. Эти два критерия бывает сложно совместить, но проектировщикам это удалось. Надеюсь, жители нас поддерживают», – сказал Александр Тугарев.

В голосовании за объекты благоустройства сможет принять участие каждый гражданин старше 14 лет, отдав свой голос за понравившийся проект на платформе 65.gorodsreda.ru

t.me/tsur65/400 128 ◉ Apr 16, 2021 at 04:56

Source: <https://t.me/tsur65/400>

Topic 3 (Public Holidays and Memorable Days):

Dear women! Congratulations on the main holiday of spring and love - International Women's Day! The most valuable, the most precious thing is you! Care and support are very important now, and we wish every moment to be filled with pleasant moments, joy and smiles! Be happy!



Source: <https://t.me/tsur46/2039>

Topic 4 (Ways to Communicate with Authorities):

Alisa, start the “Incident Management” skill!

Dialog has developed a skill for Alisa, the Yandex voice assistant. With it, you can send voice requests to executive authorities directly to Incident Management.

After the phrase “Alisa, launch the “Incident Management” skill,” the voice assistant will ask you to tell about the problem, give the address of the incident and ask about your desire to receive feedback. The answer will be sent to the email associated with your Yandex ID.

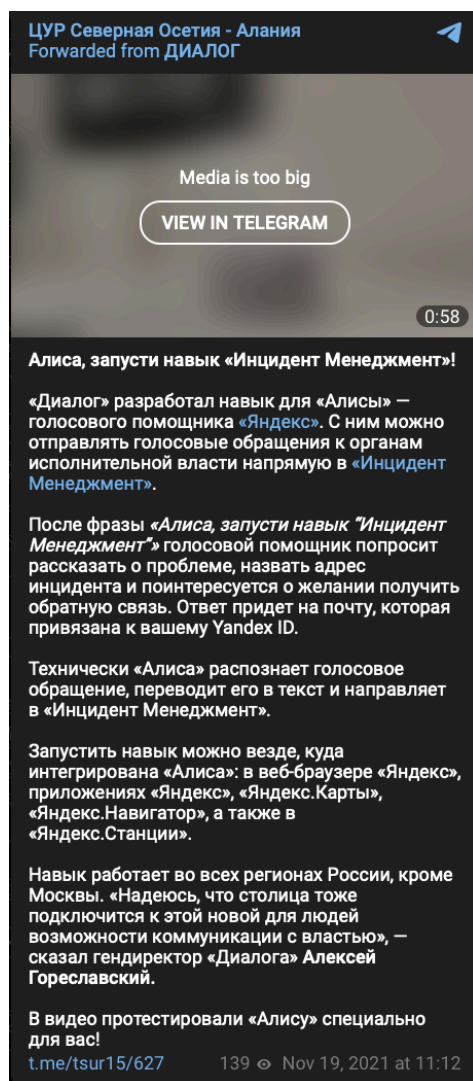
Technically, “Alisa” recognizes the voice message, translates it into text and sends it to “Incident Management”.

You can launch the skill wherever Alisa is integrated: in the Yandex web browser, Yandex, Yandex.Maps, Yandex.Navigator applications, as well as in Yandex.Station.

The skill works in all regions of Russia except Moscow. “I hope that the

capital will also join this new opportunity for people to communicate with the authorities,” said Dialog CEO Alexey Goreslavsky.

In the video we tested “Alisa” especially for you!



Source: <https://t.me/tsur15/627>

Topic 5 (Social Assistance Programs (Financial Benefits)):

Universal financial benefit.

We answer frequently asked questions

From January 1, 2023, a universal benefit will come into effect. The bill has already been submitted to the State Duma.

The universal benefit will combine benefits from a woman's pregnancy until the child reaches the age of 17. Payments will be assigned according to uniform rules using a comprehensive assessment of need.

All families with low incomes, regardless of birth order, will also be able to benefit from assistance from the budget for a child under 3 years of age.

We answer the main questions:

Estimated income accounting periods for different benefits differ. What will be the calculation period when assigning a universal benefit?

For universal benefits, the calculation period will be 12 months preceding 1 month before the month of application. That is, the income accounting period is approaching the date of payment assignment.

If a family already receives payments from maternity capital for their second child, can they apply for a universal benefit?

Yes, from January 1, 2023, a family will be able to apply for a universal benefit through State Services, the Social Fund or the Multifunctional Center.

Will an application for universal benefits need to be submitted for each child in the family?

All children in the family under the age of 17 can be indicated in one application. The allowance is assigned for each child.

Will there be a recalculation of the amount of benefits for pregnant women if it was assigned before January 1, 2023?

The size of the universal benefit will be 50, 75 or 100% of the regional subsistence minimum for the working population. Expectant mothers who receive benefits according to the old rules (in the amount of 50% of the regional monthly minimum wage for the working-age population) will be able to apply and switch to a universal benefit. The amount of the universal benefit is determined after a comprehensive assessment of need.

If a family already receives one of the benefits and has applied for a universal benefit, in case of refusal, will the payment of benefits under the old conditions continue?

Yes, if a universal benefit is not assigned, then previously assigned benefits will be paid until the end of their assignment.

Important: you cannot receive both universal benefits and benefits from the budget according to the old rules for the same child.

Will it be possible to receive simultaneously a universal benefit and payment from maternity capital for children under 3 years of age?

Yes. If a family with a child under 3 years of age receives a universal benefit, and the average per capita income of the family remains below 2 subsistence minimum wages, then such a family can apply for payment from

maternity capital.

Important: if a family has chosen to receive benefits for up to 3 years according to the old rules, rather than switch to a universal benefit, then it is impossible to receive payment from maternity capital.

If a child is born in 2023 and the family is denied universal benefits, then benefits from maternity capital are also not due?

If a family applies for the first time and does not qualify for universal benefits, then it will be possible to apply for benefits from maternity capital. It is assigned without a comprehensive assessment of need to families with an average per capita income of no more than 2 subsistence minimum wages.

Will it be possible to receive payment from maternity capital funds not only for the second child?

Yes. This payment will be assigned to families regardless of the order of birth of children. In this case, the conditions of appointment will remain unchanged:

- Monthly payments from maternity capital will be assigned to families with an average per capita income of no higher than 2 PM in the region.
- The payment amount will be 1 PM per child.

Can non-working parents now receive benefits for up to 1.5 years?

Child care benefits for children under 1.5 years of age for non-working parents will also be combined into a universal benefit. That is, after passing a comprehensive assessment of needs, a family will be able to receive 50, 75 or 100% of the regional subsistence minimum per child, as well as receive a payment from maternity capital in the amount of 1 subsistence minimum per child.

If a child was born before December 31, 2022, then you can receive payment according to the old rules until the child reaches 1.5 years of age.

ЦУР Свердловской области
Forwarded from Минтруд России
Универсальное пособие.
Отвечаем на частые вопросы

С 1 января 2023 года начнет действовать универсальное пособие. Законопроект уже внесен в Государственную думу.

Универсальное пособие объединит пособия от беременности женщины до достижения ребенком возраста 17 лет. Выплаты будут назначаться по единым правилам с применением комплексной оценки нуждаемости.

А также помощью из бюджета на ребенка до 3 лет смогут воспользоваться все семьи с невысокими доходами, вне зависимости от очередности рождения.

Отвечаем на главные вопросы

? Расчетные периоды учета доходов для разных пособий отличаются. Какой будет расчетный период при назначении универсального пособия?
Для универсального пособия расчетным периодом будут 12 месяцев, предшествующие 1 месяцу перед месяцем подачи заявления. То есть, период учета доходов приближается к дате назначения выплаты.

? Если семья уже получает выплаты из материнского капитала на второго ребенка, можно оформить универсальное пособие?
Да, с 1 января 2023 года семья сможет подать заявление на универсальное пособие через Госуслуги, в Социальном фонде или МФЦ.

? Заявление на универсальное пособие нужно будет подавать на каждого ребенка в семье? Всех детей в семье в возрасте до 17 лет можно будет указать в одном заявлении. Пособие назначается на каждого ребенка.

? Будет ли перерасчет размера пособия для беременных, если оно было назначено до 1 января 2023 года?
Размер универсального пособия составит 50, 75 или 100% регионального ПМ для трудоспособного населения. Будущие мамы, которые получают пособие по старым правилам (в размере 50% регионального ПМ для трудоспособного населения), смогут подать заявление и перейти на универсальное пособие. Размер универсального пособия определяется после комплексной оценки нуждаемости.

? Если семья уже получает одно из пособий и подала заявление на универсальное пособие, в случае отказа выплата пособий по старым условиям продолжится?
Да, если универсальное пособие не будет назначено, то ранее назначенные пособия будут выплачиваться до окончания срока их назначения.

⚡ Важно: получать одновременно универсальное пособие и пособие из бюджета по старым правилам на одного и того же ребенка нельзя.

? Можно ли будет получать одновременно универсальное пособие и выплату из материнского капитала на детей до 3 лет?
Да. Если семья с ребенком до 3 лет получает универсальное пособие, и при этом среднедушевой доход семьи остается ниже 2 ПМ, то такая семья может обратиться за выплатой из материнского капитала.

⚡ Важно: если семья выбрала получать пособие до 3 лет по старым правилам, а не переходить на универсальное пособие, то получить выплату из материнского капитала нельзя.

? Если ребенок родится в 2023 году и семья получит отказ в универсальном пособии, то пособие из материнского капитала тоже не положено?

Если семья подает заявление впервые и «не проходит» на универсальное пособие, то можно будет подать заявление на пособие из материнского капитала. Оно назначается без комплексной оценки нуждаемости семьям со среднедушевым доходом не выше 2 ПМ.

? Выплату из средств материнского капитала можно будет получить не только на второго ребенка?

Да. Такая выплата будет назначаться семьям независимо от очередности рождения детей. При этом условия назначения сохраняются без изменений.

◆ Ежемесячные выплаты из материнского капитала будут назначаться семьям со среднедушевым доходом не выше 2 ПМ в регионе.

◆ Размер выплат составит 1 ПМ на ребенка.

? Пособие до 1,5 лет неработающие родители теперь не смогут получать?

Пособие по уходу за ребенком за ребенком до 1,5 лет для неработающих родителей также будет объединено в универсальное пособие. То есть, семья после прохождения комплексной оценки нуждаемости сможет получать 50, 75 или 100% регионального ПМ на ребенка, а также оформить выплату из материнского капитала в размере 1 ПМ на ребенка.

⚡ Если ребенок родился до 31 декабря 2022 года, то получить выплату по старым правилам можно до достижения 1,5 лет ребенка.

Подписаться на Минтруд России

#минтруд_разъясняет #универсальное_пособие
#семья #дети #пособия
t.me/tsur66/169 207 Sep 30, 2022 at 11:46

Source: <https://t.me/tsur66/169>

Topic 6 (Non-Commercial Organization Dialog)

Radio Russia talked about countering fakes

On the air of Radio Russia, Tikhon Makarov, Advisor to the General Director of the Dialog Regions ANO, shared data on the situation with fakes in Russia.

“Creators of fakes use fraudulent schemes according to which they need to get the fastest possible response from the user. People give in because they do not have the time and opportunity to analyze the situation or approach it critically. Therefore, every fake requires a clear approach,” the expert noted.

According to Dialog, by 2024 the number of fakes may increase to 25 million. To check information for accuracy, Tikhon Makarov urged listeners to use special digital platforms:

“Now there are several high-quality projects that refute fakes. Information that causes you doubts can be sent to the platform or chatbot “Noodles Media”, a project of the ANO “Dialog Regions”. Our specialists will check it within 24 hours and, with reference to an authoritative source, will refute or confirm the data.”

ЦУР КБР Official
Forwarded from ЦУР Official

ТОП Результаты 2022 год
«Лапша Медиа»

Более **500 тыс.** подписчиков в соцсетях за год

Охват информационных кампаний по опровержению фейков составил более **300 млн**

В 2022 году к работе подключились **4** партнера-фактчекера — ТАСС, Лента, 360, ВВЭ

Совместно с фактчекерами проведено **1450** проверок фейковой информации

В чат-боты поступило более **90 тыс.** запросов

ЛАПША
медиа

На «Радио России» рассказали о противодействии фейкам

В эфире «Радио России» советник генерального директора АНО «Диалог Регионы» Тихон Макаров поделился данными о ситуации с фейками в России.

«Создатели фейков используют мошеннические схемы, согласно которым от пользователя нужно получить максимально быструю реакцию. Люди поддаются, потому что у них нет времени и возможности проанализировать ситуацию, критически к ней подойти. Поэтому каждый фейк требует четкого подхода», — отметил эксперт.

По прогнозам «Диалога», к 2024 году количество фейков может возрасти до 25 миллионов. Для проверки информации на достоверность Тихон Макаров призвал слушателей к использованию специальных цифровых платформ:

«Сейчас есть несколько качественных проектов, которые опровергают фейки. Информацию, которая вызывает у вас сомнения, можно отправить на платформу или чат-бот «Лапша Медиа», проект АНО «Диалог Регионы». Наши специалисты проверят ее в течение 24 часов и со ссылкой на авторитетный источник опровергнут или подтвердят данные».

Чат-бот Сайт

Группа ВК Группа ОК

t.me/tsur_07/1730 447 Mar 16 at 10:25

Source: https://t.me/tsur_07/1730

Topic 7 (Useful Information for Citizens):

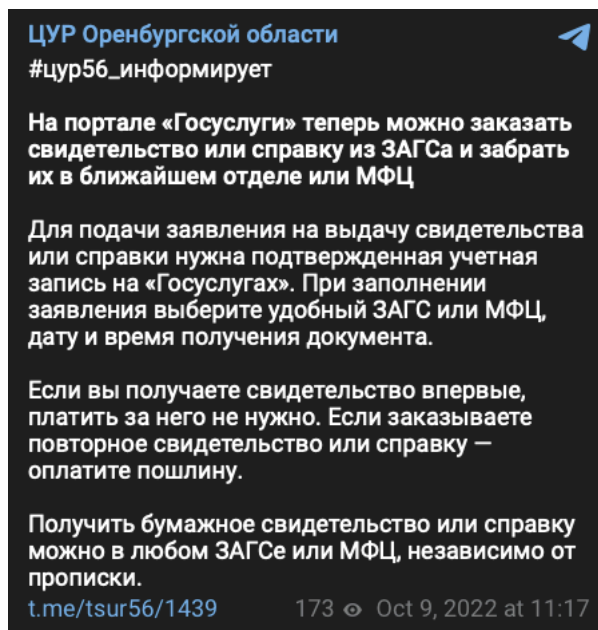
On the Government Services portal you can now order a certificate or confirmation letter from the registry office and pick it up at the nearest department or Multifunctional Center (MFC)

To apply for a confirmation or certificate, you need a verified account on the Government Services. When filling out the application, select a convenient registry office or MFC, the date and time of receipt of the

document.

If you are receiving a certificate for the first time, you do not need to pay for it. If you order a repeated certificate or certificate, pay the fee.

You can obtain a paper certificate or confirmation at any registry office or MFC, regardless of your residence address.



Source: <https://t.me/tsur56/1439>

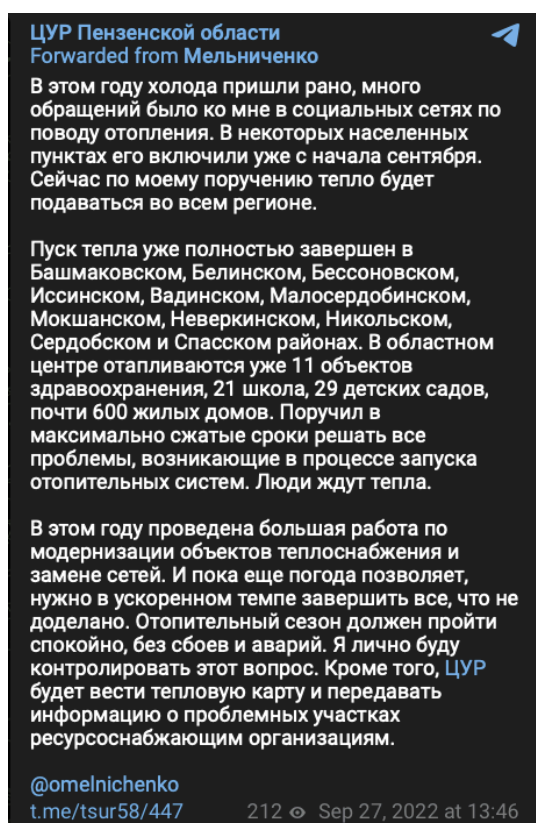
Topic 8 (Citizens Appeals and Solved Problems):

This year the cold came early, I received a lot of requests on social networks about heating. In some localities it has been turned on since the beginning of September. Now, on my instructions, heat will be supplied throughout the region.

The start-up of heat has already been fully completed in the Bashmakovsky, Belinsky, Bessonovsky, Issinsky, Vadinsky, Maloserdobinsky, Mokshansky, Neverkinsky, Nikolsky, Serdobsky and Spassky districts. In the regional center, 11 healthcare facilities, 21 schools, 29 kindergartens, and almost 600 residential buildings are already heated. I instructed that all problems arising during the startup of heating systems be resolved as quickly as possible. People are waiting for warmth.

This year, a lot of work has been done to modernize heat supply facilities and replace networks. And while the weather still permits, we need to

quickly complete everything that is not completed. The heating season should go smoothly, without failures or accidents. I will personally monitor this issue. In addition, the Regional Governance Center will maintain a heat map and transmit information about problem areas to resource supply organizations.

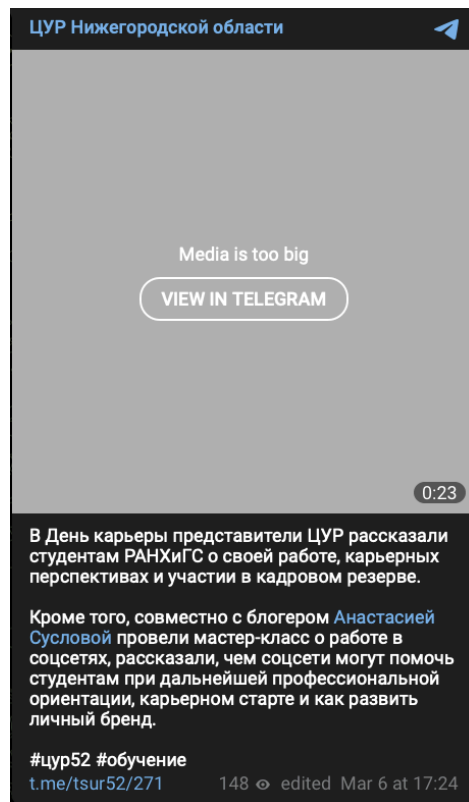


Source: <https://t.me/tsur58/447>

Topic 9 (School and Education):

On Career Day, representatives of the Regional Governance Center told RANEPА students about their work, career prospects and participation in the personnel reserve.

In addition, together with blogger Anastasia Suslova, they held a master class on working in social networks, told how social networks can help students with further professional guidance, career start and how to develop a personal brand.



Source: <https://t.me/tsur52/271>

Topic 10 (Solving Problems):

We present the top regions by the share of requests processed in January.

We remind you that processing a request is the primary response to a user's message on social media platforms.

In December, five regions processed all requests. These, as in the last three months, are colleagues from the Kabardino-Balkarian and Karachay-Cherkess Republics. North Ossetia-Alania also made it to the top again. In addition, the Chechen Republic and Kuzbass scored 100%.

The number of regions with an indicator of 99% has halved compared to December. This list includes 10 regions. They are presented on our card.

This time, the region with the lowest percentage of requests processed was the Murmansk region. The result of colleagues was 84%.

ЦУР Республики Алтай
Forwarded from ЦУР Official

Центр Управления Регионами

ПРЕДСТАВЛЯЕМ ТОП РЕГИОНОВ ПО ДОЛЕ ОБРАБОТКИ ОБРАЩЕНИЙ В ЯНВАРЕ

100%

Чеченская Республика
Кузбасс
Карачаево-Черкесская Республика
Республика Северная Осетия – Алания
Кабардино-Балкарская Республика

Центр Управления Регионами

ПРЕДСТАВЛЯЕМ ТОП РЕГИОНОВ ПО ДОЛЕ ОБРАБОТКИ ОБРАЩЕНИЙ В ЯНВАРЕ

99%

Самарская область
Республика Бурятия
Оренбургская область
Тамбовская область
Курганская область
Республика Алтай
Ямало-Ненецкий автономный округ
Республика Ингушетия
Красноярский край

Представляем топ регионов по доле обработки обращений в январе.

Напоминаем, что обработка обращения – это первичный ответ на сообщение пользователя в соцсетях.

В декабре пять регионов обработали все обращения. Это, как и в последние три месяца, коллеги из Кабардино-Балкарской и Карачаево-Черкесской Республик. Северная Осетия – Алания также вновь попала в топ. Кроме того, 100% набрали Чеченская Республика и Кузбасс.

Количество регионов, у которых показатель составил 99%, по сравнению с декабрем уменьшилось вдвое. В этот список попали 10 регионов. Они представлены на нашей карточке.

На этот раз регионом с самым низким показателем по доле обработки обращений оказалась Мурманская область. Результат коллег составил 84%.

#аналитика
t.me/tsur04/813 108 Feb 15, 2022 at 16:16

Source: <https://t.me/tsur04/813>

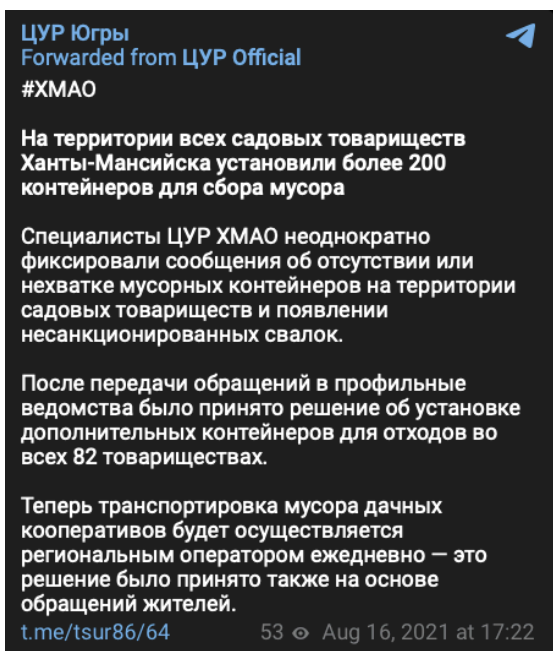
Topic 11 (Communal Services and Renovation):

More than 200 containers for waste collection were installed on the territory of all gardening communities in Khanty-Mansiysk

Specialists from the Center for Urban Development in Khanty-Mansi Autonomous Okrug have repeatedly recorded reports of the absence or shortage of garbage containers on the territory of gardening communities and the appearance of unauthorized dumps.

After submitting requests to the relevant departments, a decision was made to install additional waste containers in all 82 partnerships.

Now the transportation of waste from dacha cooperatives will be carried out by the regional operator every day - this decision was also made based on requests from residents.

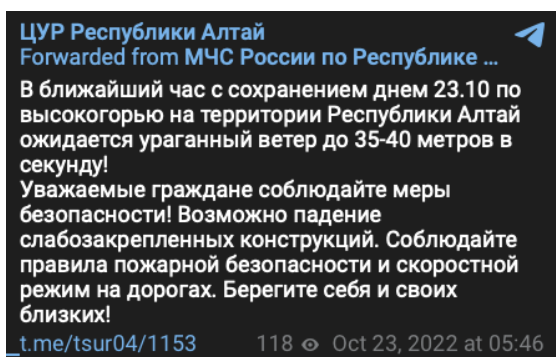


Source: <https://t.me/tsur86/64>

Topic 12 (Incidents (fires, floods)):

In the next hour, with the day remaining at 23.10, hurricane winds of up to 35-40 meters per second are expected across the highlands in the territory of the Altai Republic!

Dear citizens, follow safety measures! Poorly secured structures may fall. Follow fire safety rules and speed limits on the roads. Take care of yourself and your loved ones!



Source: <https://t.me/tsur04/1153>

Appendix E. Interest in Navalny's activities

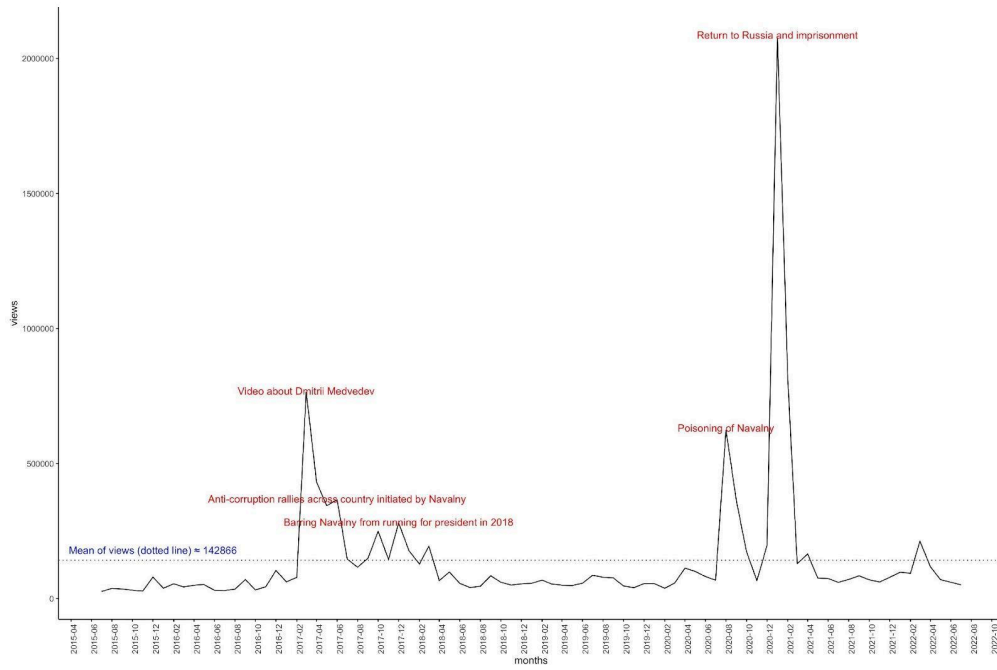


Figure E1. Interest in Navalny according to visits to his Wikipedia page in Russian, only users

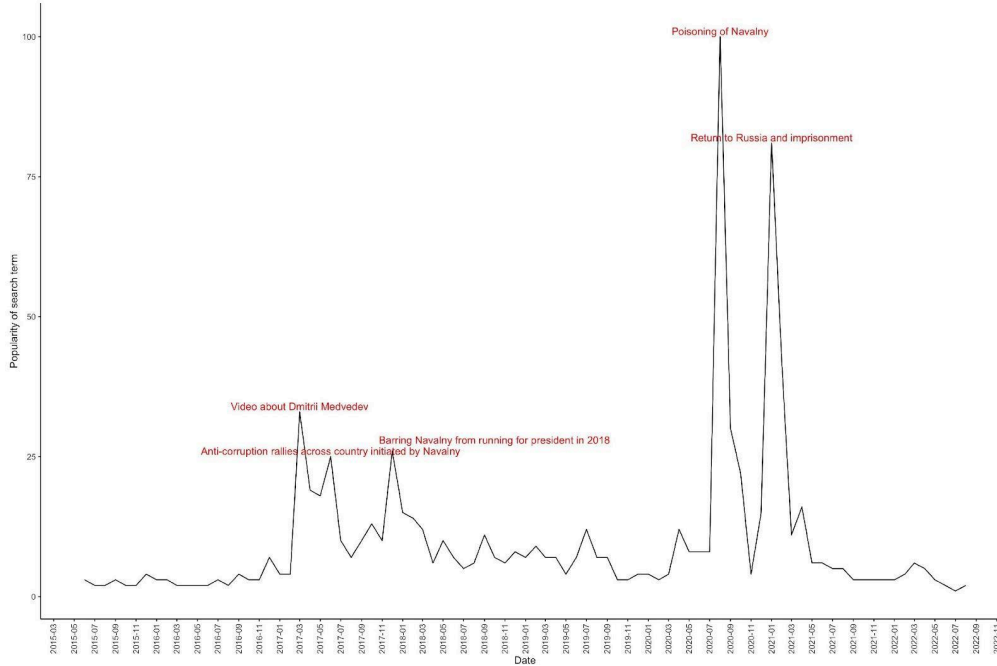


Figure E2. Interest in Navalny according to Google Trends

Appendix F. Analysis of YouTube comments

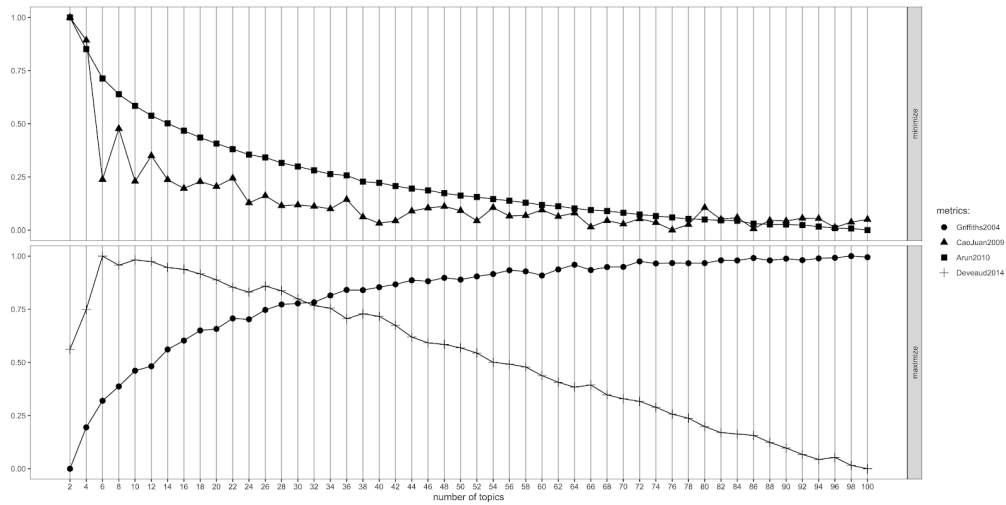


Figure F1. Metrics from LDA tuning

Table F1. Summary of STM, 61 topics

Topic	Summary of topic	7 FREX words	Share
5	Freedom for Navalny	Navalny, freedom, free, release, political, reality, estimate	4,8%
3	Promotion of video	top, keep, hooray, fire, go up, let's go, maintaining	4%
16	Corruption among elites	Putin, stay (in jail), thief, officary, jail, regular, member of parliament	2,8%
12	Trending the video	trend, comment, show, raise, bring (to the top), send, promote	2,7%
41	Save Navalny	help, fear, hope, God, family, open, idiot	2,5%
11	Revolution	people, revolution, endure, come, enemy, organize, change	2,4%
51	Convince others	tell, film, win, politics, together, strongly, opposition	2,3%
9	State propagandists	watch, begin, real, Internet, listen, Soloviev, shock	2,3%
2	Discussing a video	video, video clip, write, read, conclusion, delete, destiny	2,3%
50	Praising Navalny's activity	investigation, wait, shoot (video), bravo, close, super, awesome	2,3%
40	Corruption	money, pay, earn, buy, take, collect, steal	2,2%
47	Navalny's attack on Putin	president, support, give, personally, lie (mortality), die, palace	2,2%

Topic	Summary of topic	7 FREX words	Share
22	Rule of law in Russia	law, court, citizen, Russian, right, accept, constitution	2,1%
7	Arguments	believe, (to put in) jail, history, want, nonsense, proof, homeland	2%
24	Regime's evolution	become, full, occur, (of) Putin, agreeable, severely, horror	2%
27	Election	elections, vote, decide, visit (an election commission), honest, candidate, pass	2%
33	Corruption	corruption, state, level, fight, create, fight, high	1,9%
36	Potential pro-government astroturfing	like, put, bot, deliver, forget, remove, check	1,9%
53	Criminal and authorities	thief, crook, regime, united, party, murderer, Vladimir	1,8%
45	Money, taxes	ruble, tax, bill, price, cost, billion, business	1,8%
14	Poisoning	FSB, panties, phone, turn out, have to, employee, Novichok	1,8%
43	Salaries, inequality	work, receive, salary, month, site, medical doctor, work	1,8%
1	Positive reaction to a video and praising Navalny	well done, work, hold on, team, continue, forward, enormous	1,7%
13	Promotion of video #2	comment, future, equal, leave, indifferent, youth, important	1,7%
19	Support of Navalny	understand, channel, answer, answer, support, similar, keep silent	1,7%
58	Attempt to kill Navalny	kill, clown, poison, agent, sorry, Germany, normal	1,7%
26	Protest, collective actions	go out, rally, call, police, protest, seek, action	1,7%
4	Praising Navalny #2	health, (good) luck, right, handsome, save, hero, wish	1,6%
20	Elections, voting options	vote, leave, bad, choose, Grudinin, ask, moreover	1,6%
42	Corruption in Moscow	Moscow, city, apartment, rich, region, expensive, build	1,6%
17	Non-discernible	fact, problem, system, Russian, try, population, USSR	1,6%
8	Sergei Furgal case (in Khabarovsk region)	power, example, return, lead, begin, Khabarovsk, demand	1,5%

Topic	Summary of topic	7 FREX words	Share
34	Pensions, social policy	pension, war, poor, pensioner, age, grandfather, pension	1,5%
49	Non-discernible #2	go, ass, topic, speech, school, plan, norm	1,5%
10	Views, YouTube's statistics	view, million, freeze, start, recruit, log in, subscriber	1,4%
31	Geopolitics	Ukraine, bad, kremlin, turn out, Europe, mister, Crimea	1,4%
46	Views, YouTube statistics #2	thousand, quantity, number, get up, minimum, grow, seriously	1,4%
21	Promotion of video #3	YouTube, promotion, hit, for the sake of, necessarily, drive, bluntly	1,3%
60	Non-discernible #3	many, most importantly, offer, most, program, ready, like	1,3%
59	Non-discernible #4	stay, normal, opinion, learn, couple, anyone, quickly	1,3%
55	Replies to other commenters	Alexander, Sergey, Dmitry, Andrey, mouth, clear, Ivanov	1,3%
30	About criminal cases related to Navalny	business, engage, general, scary, forest, personal, correct	1,2%
6	Attacks on government	government, Medvedev, represent, head, rat, post, relative	1,2%
56	Non discernible #5	information, situation, interesting, idea, search, late, data	1,2%
28	Navalny and the US	USA, name, thing, language, surname, American, anavalny (playing with Navalny's surname)	1,2%
35	Non-discernible #6	blunt, direct, by the way, attention, remember, blood, straight	1,2%
39	Young generation	brains, grab, instead, young, brain, generation, main	1,1%
23	Chance to change	come, carry, opportunity, thought, order, group, error	1,1%
44	Non-discernible #7	real, king, excellent, conduct, great, sense, century	1,1%
61	Non-discernible #8	any, simple, rest, ordinary, perhaps, be, reason	1%
25	Attacks on Navalny	find, West, call, favor, low, specifically, prostitute	0,9%
29	Navalny's team	guys, right, love, guy, man, brave, Sobol	0,9%
37	Collective actions	enough, action, act, crowd, active, body, role	0,9%

Topic	Summary of topic	7 FREX words	Share
32	Luxury lifestyle of elite members	slave, plane, yacht, desire, be called, touch, method	0,8%
38	Smart voting	smart, vote, participate, global, territory, leader, item	0,8%
52	Non-discernible #9	sell, apparently, yeah, run, budget, run, score	0,8%
18	Shaming someone	shame, conscience, lose, honor, fear, shame, human	0,8%
54	Non-discernible #10	measure, relate, edge, mask, reach, serve, local	0,8%
57	Discussions about corruption	Ivan, relax, smoke, villa, Italy, nature, express	0,7%
15	Heroes of Navalny's investigations	house, before, Kudryavtsev, neighbor, (Nastya) Rybka, maximum, known	0,7%
48	Wealthy elites	honestly, want, argument, wealth, right, absolutely, ruler	0,6%

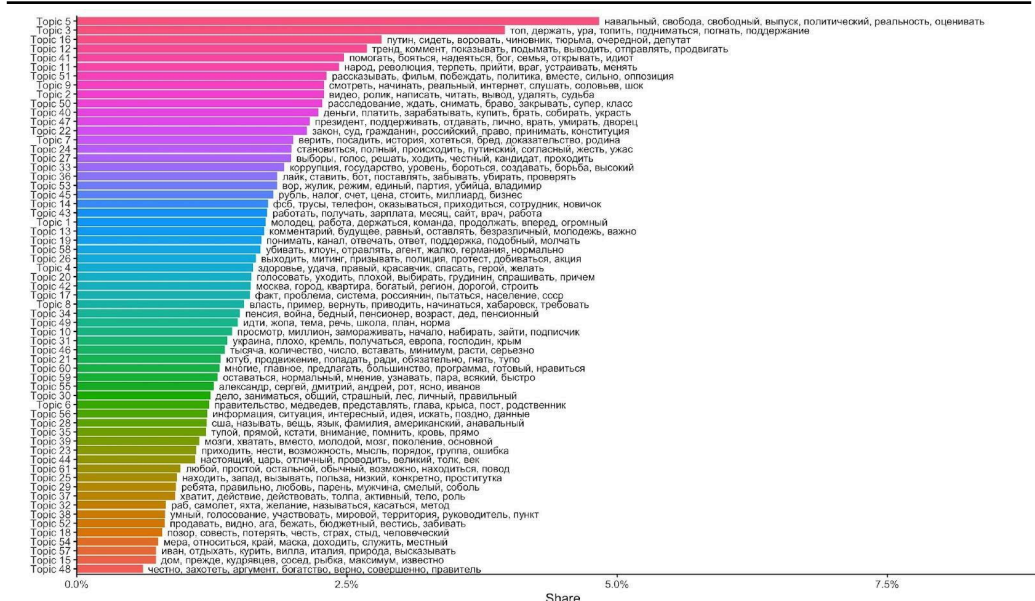


Figure F2. STM analysis results of comments on Navalny's YouTube channel, highest probability words. Bars indicate the share of a topic in the text corpus.

Table F2. Number of comments left by one-off and prolific commenters in the period of high and low interest in Navalny, without restriction of being published within 7 days after a video release

	by one-off commenters	by prolific commenters
High Interest in Navalny	581,337	3,679,408
Low Interest in Navalny	385,243	4,334,325

Table F3. Number of prolific commenters and comments they posted depending on the period of interest in Navalny, without restriction of being published within 7 days after a video release

	High Interest in Navalny	Low Interest in Navalny
Commenters	422,047	469,917
Comments	3,679,408	4,334,325

Table F4. Retention of commenters engaged in discussion when interest in Navalny was high, with bootstrapped 95 percent confidence intervals

Month	Mean	Lower	Upper
1	100%	100%	100%
2	1.6%	1.4%	1.8%
3	0.8%	0.7%	0.9%
4	0.9%	0.8%	1%
5	0.6%	0.5%	0.6%
6	0.5%	0.4%	0.6%
7	0.6%	0.5%	0.6%
8	0.5%	0.4%	0.6%
9	0.4%	0.4%	0.5%
10	0.5%	0.4%	0.5%
11	0.4%	0.4%	0.4%
12	0.3%	0.3%	0.4%
13	0.4%	0.4%	0.5%
14	0.3%	0.2%	0.3%
15	0.3%	0.3%	0.4%

more than 15 months	2.2%	2%	2.4%
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Table F5. Retention of commenters engaged in discussion when interest in Navalny was lower, with bootstrapped 95 percent confidence intervals

Month	Mean	Lower	Upper
1	100%	100%	100%
2	2.7%	2.3%	3.1%
3	1.6%	1.2%	2%
4	1.3%	1.1%	1.6%
5	0.8%	0.6%	0.9%
6	1.2%	0.7%	2.2%
7	0.8%	0.7%	0.9%
8	1.2%	0.7%	2.2%
9	1.2%	0.7%	2.2%
10	0.8%	0.7%	0.9%
11	0.6%	0.5%	0.9%
12	0.6%	0.5%	0.7%
13	0.6%	0.5%	0.7%
14	0.4%	0.4%	0.5%
15	0.6%	0.5%	0.9%
more than 15 months	4.9%	4.2%	5.9%

Table F6. Retention of pro-government commenters engaged in discussion when interest in Navalny was high, with bootstrapped 95 percent confidence intervals

Month	Mean	Lower	Upper
1	100%	100%	100%
2	13.2%	11.6%	14.9%
3	11.3%	9.8%	12.9%
4	10.2%	8.8%	11.7%
5	8.5%	7.3%	9.7%
6	7.8%	6.5%	9.2%
7	6.8%	5.8%	7.8%
8	7%	6.2%	8%

9	7.4%	6.1%	8.7%
10	7.3%	6.2%	8.5%
11	7.2%	6.2%	8.2%
12	6.5%	5.5%	7.6%
13	5.7%	4.8%	6.8%
14	4%	3.4%	4.7%
15	3.3%	2.7%	4%
16	24.4%	22.5%	26.4%

Table F7. Retention of pro-government commenters engaged in discussion when interest in Navalny was lower, with bootstrapped 95 percent confidence intervals

Month	Mean	Lower	Upper
1	100%	100%	100%
2	13.5%	11.9%	15.5%
3	12.6%	10.7%	14.8%
4	11.7%	9.9%	13.8%
5	11.6%	9.7%	14%
6	11.4%	9.5%	13.7%
7	12.3%	10.4%	14.4%
8	10.9%	9.1%	13.1%
9	10.5%	8.7%	12.8%
10	10.9%	8.9%	13.2%
11	10.2%	8.4%	12.4%
12	7.6%	6.4%	8.8%
13	10.4%	8.3%	13%
14	9.6%	7.7%	11.9%
15	10.4%	7.7%	13.5%
16	32.6%	29.8%	35.5%

Table F8. Retention of opposition-minded commenters engaged in discussion when interest in Navalny was high, with bootstrapped 95 percent confidence intervals

Month	Mean	Lower	Upper
1	100%	100%	100%
2	17.5%	16.1%	18.9%
3	15.3%	13.6%	17.1%

4	12.7%	11.4%	13.9%
5	11%	9.8%	12.2%
6	10.2%	9%	11.5%
7	9.7%	8.4%	11.2%
8	10.2%	8.7%	12.1%
9	11%	9.5%	12.5%
10	10.1%	8.8%	11.5%
11	10.7%	9.3%	12.1%
12	8.4%	7.3%	9.5%
13	7%	6%	8.1%
14	6.4%	5.3%	7.7%
15	5.6%	4.8%	6.6%
16	33.8%	32%	36.1%

Table F9. Retention of opposition-minded commenters engaged in discussion when interest in Navalny was lower, with bootstrapped 95 percent confidence intervals

Month	Mean	Lower	Upper
1	100%	100%	100%
2	17.2%	15.7%	18.7%
3	14.8%	13.4%	16.4%
4	14.2%	12.7%	15.8%
5	14.3%	12.6%	16.1%
6	13%	11.7%	14.3%
7	13%	11.7%	14.4%
8	13.5%	12%	15.2%
9	12.8%	11.2%	14.5%
10	12.4%	11.1%	13.9%
11	12.2%	10.7%	13.9%
12	11.3%	9.8%	13.1%
13	11.3%	9.8%	12.9%
14	11.2%	9.6%	13.1%
15	10.8%	9.5%	12.2%
16	42.2%	39.4%	45%

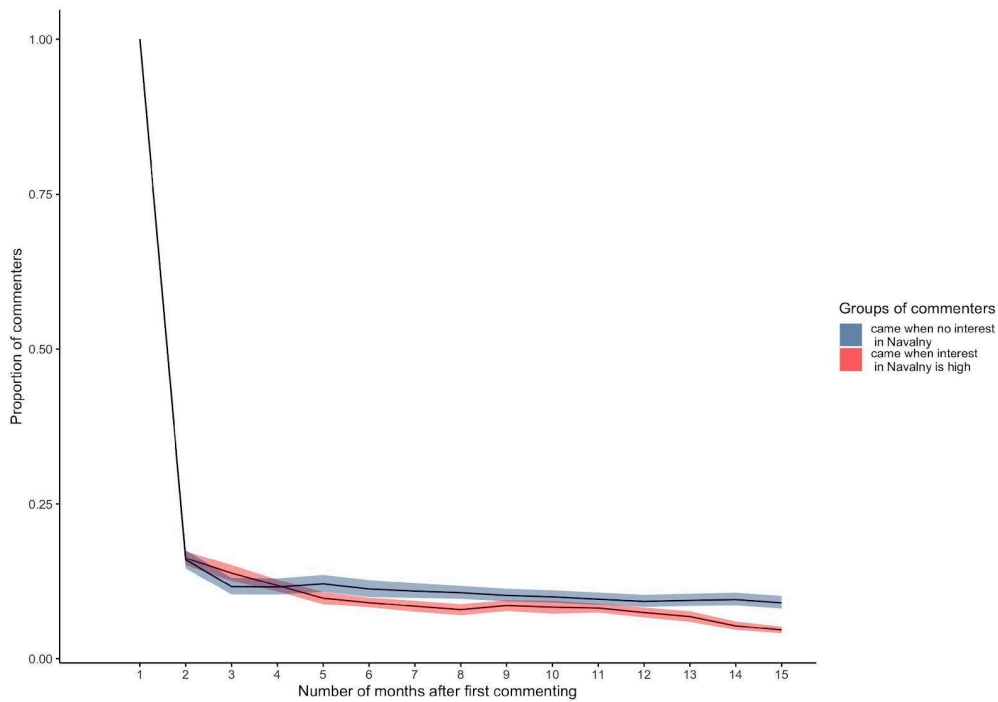


Figure F3. Retention of different types of commenters, with bootstrapped 95% confidence intervals, months are defined by the act of commenting, not consecutive in calendar order

Table F10. Retention commenters engaged in discussion when interest in Navalny was high, with bootstrapped 95 percent confidence intervals, months are defined by the act of commenting, not consecutive in calendar order

Month	Mean	Lower	Upper
1	100%	100%	100%
2	16.2%	15.1%	17.3%
3	13.8%	12.6%	15.1%
4	11.8%	10.9%	12.8%
5	9.8%	8.8%	10.8%
6	9.1%	8.3%	9.9%
7	8.5%	7.6%	9.4%
8	7.9%	7%	8.8%
9	8.6%	7.7%	9.5%
10	8.3%	7.3%	9.4%
11	8.2%	7.4%	8.9%
12	7.4%	6.7%	8.2%

13	6.8%	6%	7.7%
14	5.3%	4.6%	6%
15	4.6%	4.1%	5.2%

Table F11. Retention of commenters engaged in discussion when interest in Navalny was lower, with bootstrapped 95 percent confidence intervals, months are defined by the act of commenting, not consecutive in calendar order

Month	Mean	Lower	Upper
1	100%	100%	100%
2	16%	14.6%	17.5%
3	11.6%	10.4%	13.1%
4	11.6%	10.4%	13%
5	12.1%	10.8%	13.5%
6	11.3%	10%	12.7%
7	10.9%	9.8%	12.2%
8	10.7%	9.7%	11.8%
9	10.2%	9.3%	11.3%
10	10%	9.1%	11%
11	9.6%	8.7%	10.7%
12	9.3%	8.3%	10.3%
13	9.4%	8.5%	10.5%
14	9.6%	8.6%	10.7%
15	9%	8.1%	10.1%

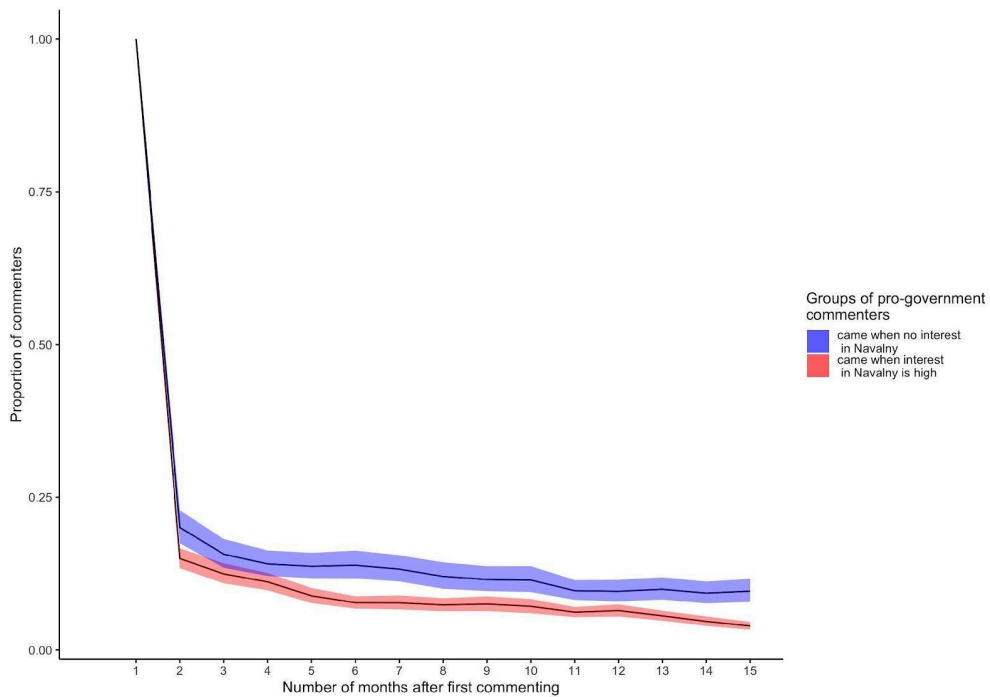


Figure F4. Retention of commenters using pro-government cues, with bootstrapped 95% confidence intervals, months are defined by the act of commenting, not consecutive in calendar order

Table F12. Retention of pro-government commenters engaged in discussion when interest in Navalny was high, with bootstrapped 95 percent confidence intervals

Month	Mean	Lower	Upper
1	100%	100%	100%
2	15%	13.4%	16.6%
3	12.5%	10.9%	14.2%
4	11.1%	9.8%	12.6%
5	8.9%	7.7%	10.2%
6	7.7%	6.8%	8.8%
7	7.7%	6.7%	8.9%
8	7.4%	6.4%	8.5%
9	7.5%	6.4%	8.8%
10	7.1%	6%	8.3%
11	6.2%	5.4%	7%
12	6.5%	5.5%	7.5%

13	5.6%	4.8%	6.4%
14	4.7%	4%	5.5%
15	3.9%	3.3%	4.6%

Table F13. Retention of pro-government commenters engaged in discussion when interest in Navalny was lower, with bootstrapped 95 percent confidence intervals

Month	Mean	Lower	Upper
1	100%	100%	100%
2	20%	17.5%	22.9%
3	15.7%	13.5%	18.2%
4	14.1%	12.1%	16.3%
5	13.7%	11.7%	15.9%
6	13.9%	11.7%	16.3%
7	13.2%	11.2%	15.5%
8	12%	10%	14.3%
9	11.5%	9.6%	13.7%
10	11.5%	9.5%	13.7%
11	9.7%	8.2%	11.4%
12	9.6%	8%	11.5%
13	9.9%	8.2%	11.9%
14	9.3%	7.6%	11.2%
15	9.6%	7.9%	11.7%

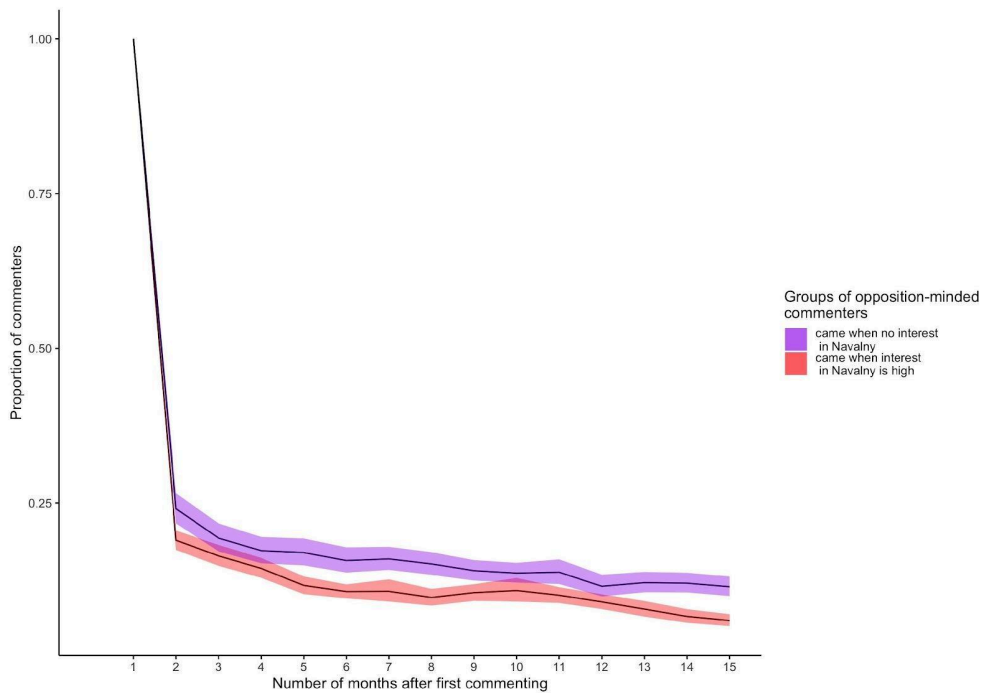


Figure F5. Retention of commenters using pro-opposition cues, with bootstrapped 95% confidence intervals, months are defined by the act of commenting, not consecutive in calendar order

Table F14. Retention of opposition-minded commenters engaged in discussion when interest in Navalny was high, with bootstrapped 95 percent confidence intervals

Month	Mean	Lower	Upper
1	100%	100%	100%
2	19%	17.4%	20.5%
3	16.4%	14.8%	18.2%
4	14.4%	12.9%	16.1%
5	11.7%	10.3%	13.1%
6	10.7%	9.6%	11.8%
7	10.7%	9.1%	12.6%
8	9.7%	8.4%	11.1%
9	10.5%	9.2%	11.9%
10	10.8%	9.1%	12.9%
11	10.1%	8.8%	11.4%
12	9%	7.8%	10.2%
13	7.8%	6.6%	9.1%

14	6.6%	5.6%	7.8%
15	6%	5.1%	7%

Table F15. Retention of opposition-minded commenters engaged in discussion when interest in Navalny was lower, with bootstrapped 95 percent confidence intervals

Month	Mean	Lower	Upper
1	100%	100%	100%
2	24.1%	21.7%	26.6%
3	19.3%	17.2%	21.7%
4	17.3%	15.2%	19.5%
5	17%	14.9%	19.3%
6	15.7%	13.7%	17.8%
7	15.9%	14.2%	17.9%
8	15.1%	13.4%	17%
9	14%	12.5%	15.8%
10	13.6%	12.1%	15.3%
11	13.8%	11.9%	15.9%
12	11.5%	9.9%	13.4%
13	12.1%	10.6%	13.8%
14	12%	10.5%	13.7%
15	11.4%	9.9%	13.1%

Appendix G. Pro-government and pro-opposition cues in comments

To identify cross-cutting disagreement between authorities and opposition supporters, I employed a dictionary-based approach with a specific focus on derogatory references to Putin / authorities and Navalny / opposition. Since users are creative in insulting language and making name-calling and sometimes (un)intentionally make mistakes in pejoratives formed from the surnames of Putin and Navalny, major derogatory references were also combined with forms containing such obfuscations. The dictionary also has a politically motivated hate speech stemming from the names of Russian propagandists, the parliament, and the ruling party (“United Russia”). When it comes to the camp of opposition-minded users, I included words signaling the link between dissent and the West, references to the Ukrainian revolution of 2013, etc.

The period for which comments were collected covered a wide temporal range, during which the conflict between Russia and Ukraine intensified. Accordingly, the words used on the Russian segment of the Internet to indicate support for one side or the other were checked. Some of these words were included in the final dictionary (for example, “украинацизм” (ukronazism), “рабсия” (rabsiya), while others were not (“хохол” (“khokhol”), “москаль” (“moskal”), “кацап” (“katsap”) and others). The latter are used equally in messages criticizing the Russian government and disapproving the actions of the opposition and Navalny in particular.

In Internet discussions, the following words have weak discriminatory power to detect pro-government and opposition discourses and are not included in the keywords list: “нацпредатель” (“national traitor”), “сталинист” (“stalinist”), “враг народа” (“people's enemy”), “мусора” (derogatory reference to police), “дед” (“granddad” - reference to Putin), “несогласные” (“dissenters”), “чайка” (“Chaika” - reference to the former Prosecutor General Yuri Chaika), “вождь” (“dux”), “поклонная (гора)” (“Worshipful Submission Hill” - reference to a place where pro-government rallies took place in 2012), “Леонтьев” (“Leontiev” - reference to a Russian propagandist, press secretary

of Rosneft corporation), “Кургинян” (“Kurginyan” - reference to Sergei Kurginyan, a pro-government journalist).

I keep two references to the editor-in-chief of RT media corporation Margarita Simonyan (“Симоньян”, “СимоНЯн”) in the keywords list, because commenters associate her surname with the propaganda efforts of authorities and, unlike Kiselev and Solovyov, there are no other commenters with such a surname to whom other participants may refer (and, hence, distort the classification). The same is applied to the surname of Gabrelyanov (“Габрелянов”), the head of the media corporation Life, and Olga Skabeeva (“Скабеева”) who is a TV presenter and pro-government political commentator.

Table [G1](#) contains major words to discern between pro-government and opposition stances. I do not present all the possible distortions. The final version of the dictionary contained approximately 530 string patterns that were used to search for pro-government and opposition comments.

Table G1. Dictionary for identifying pro- / anti-government comments, for lower-cased text

Derogatory words towards Navalny and opposition	Derogatory words towards Putin
“нассальный” (playing with the word “piss” and Navalny's surname)	“путлер” (playing with Hitler and Putin's surname)
“навальнята” (small navalnys)	“плешивый” (baldheaded)
“карнавальный” (carnival-ny)	“путен” (playing with Putin's surname)
“навральный” (playing with the word “lier” and Navalny's surname)	“путэн” (playing with Putin's surname)
“наебальный” (playing with a rude word “ie” and Navalny's surname)	“путька” (playing with Putin's surname)
“навальнер” (Navalner, reference to Hitler)	“вован” (playing with Putin's name)
“анальный” (playing with the word “anal” and Navalny's surname)	“путинизм” (Putin's regime, Putinism)
“сисян” (playing with the word “boobs” - reference to a poor physical condition of Navalny)	“вовка” (playing with Putin's name)
“авальный” (playing with Navalny's surname - Avalny)	“вовчик” (playing with Putin's name)

“овальный” (playing with the word “oval” and Navalny's surname - Ovalny)	“пукин” (playing with Putin's surname)
“алешка” (derogatory treatment by name Alexei)	“пукинизм” (playing with Putin's surname)
“алёшка” (derogatory treatment by name Alexei)	“пыня” (meme reference to Putin)
“брехальный” (playing with the word “brekhnya” or “bullshit” and Navalny's surname)	“ботокс” (botox - reference to plastic surgery made by Putin ⁷⁸)
“навалльный” (deliberate distortion of the surname Navalny to offend him),	“обнуленец” (a reference to “resetting to zero” the number of Putin's presidential terms after 2020 change of the Constitution of Russia ⁷⁹)
“нава” (deliberate shortening of the surname Navalny to offend him)	“кабай” (a reference to the alleged marriage of Putin to Alina Kabaeva, famous gymnasts in rhythmic gymnastic)
“насральный” (playing with the word “shit” and Navalny's surname)	“солнцеликий” (“sun-faced”, meme reference to Putin, comparison with North Korean leaders)
“навальноид” (playing with Navalny's surname)	“карлик” (midget)
“навальнабот” (Bots of Navalny)	“хуйло” (dickhead ⁸⁰)
“навальнобот” (Bots of Navalny)	“пугабэ” (playing with Putin's surname, reference to Robert Mugabe, former president of Zimbabwe)
“новальнобот” (Bots of Navalny)	“вовван” (playing with Putin's name)
“новальнабот” (Bots of Navalny)	“хуепутало” (playing with Putin's surname)
“лехаим” (lechaim - from Hebrew “to life”, a drinking toast, but in the context of political discussions it refers to the antisemitic position of some Navalny critics ⁸¹)	“пуйло” (dickhead, playing with surname and slogan from the footnote ⁸²)
“провальный” (playing with the word “провал” - “failure” and Navalny's surname)	“запутинец” (‘for Putin’ - Putin's supporters)

⁷⁸ <https://www.theguardian.com/world/2011/sep/26/putin-plastic-surgery>

⁷⁹ <https://www.bbc.com/news/world-europe-51815667>

⁸⁰ https://en.wikipedia.org/wiki/Putin_khuylo!

⁸¹ Navalny is sometimes associated by his critics with the so-called “Russian liberals” of the 1990s, who served in government and were responsible for unpopular market reforms. Among them were a number of representatives of Jewish ethnicity. Unpopular reforms have fueled anti-Semitic sentiments which are being extrapolated to Navalny by his opponents in the form of such references as Lechaim.

⁸² https://en.wikipedia.org/wiki/Putin_khuylo!

“альоша” (derogatory treatment by name Alexei)	“бункерный” (bunker, reference to the situation during the coronavirus pandemic, when Vladimir Putin completely stopped communicating with the population directly and led the government online)
“обосральный” (playing with the word “shit” and Navalny's surname)	“хутин” (playing with Putin's surname and the word “fuck”)
“дерьмократ” (playing with the word “democrat” and “дерьмо” [der'mo] - “shit”)	“пуй” (playing with Putin's surname and the word “fuck”)
“либераст” (playing with the word “liberal” and “pederasty”)	“путиносос” (playing with Putin's surname and the word “sucker”)
“фбкашный” (derogatory treatment by the abbreviation of Navalny's organization, the Anti-Corruption Foundation)	“лилипутин” (playing with Putin's name and the word “lilliputin”)
“демшиза” (playing with the word “democrat” and “schizophrenia”)	“моль” (moth, Putin's nickname during his service in the KGB)
“анальнобот” (Bots of Navalny, and playing with the word “anal”)	“лилипутан” (playing with Putin's name and the word “hooker” (“путана”))
“фекальный” (playing with the word “excrement” and Navalny's surname)	“путя” (playing with Putin's surname)
“хомяк” (hamster - derogatory treatment to those who criticize the government on the Web)	“путиноид” (playing with Putin's surname)
“хомячий” (hamster - derogatory treatment to those who criticize the government on the Web)	“зомбоящик” (zombie box - reference to a state TV propaganda)
“либерд” (playing with the word “liberal”)	“утин” (Utin - playing with Putin's name)
“навалькин” (playing with the surname of Navalny)	“хубло” (Hublo - playing with Putin's name and the watch brand with insulting references)
“нахальный” (playing with the name of Navalny and a word "impertinent")	“колорад” (Colorado beetle - derogatory reference to the regime supporters)
“майданутый” (playing with a word “Maidan” (reference to revolution in Ukraine) and "fucked up")	“димон” (Dimon - reference to a former president Dmitry Medvedev)
“дновальный” (playing with surname Navalny and word “bottom” (“дно”))	“плутин” (Plutin - playing with the surname of Putin and the word “rogue” (“плут”))
“болтальный” (playing with surname Navalny and word “talk” (“болтать”))	“рассея” (Rasseya - one of the forms of playing with the country name Russia)
“горе-оппозиция” (pathetic opposition)	“ура-патриот” (hurray patriot)

<p>“навальнофил” (Navalnophil)</p> <p>“Сорос” (Soros - mentioning of Open Society Foundations of George Soros)</p>	<p>“путинофил” (Putinophil)</p> <p>“15 рублей, 85 рублей” (15 rubles, 85 rubles - reference to the practice of paid commenting when pro-government agents pay commenter 15 or 85 rubles per written messages)</p>
<p>“госдеп” (Gosdep - reference to the US Department of State)</p>	<p>“бобреха, боброедка” (beaver, beaver-eater - reference to the RT editor-in-chief Margarita Simonyan)</p>
<p>“укрофашизм, укрофашист, укронацизм, укронацист - playing with the root Ukr (reference to Ukraine) and names of ideologies)</p>	<p>“лахта, ольгино, пригожинские, савушкино, еркую” (references to organizations involved in pro-government astroturfing campaigns)</p>
<p>“гейропа” (Gayrope - playing with Europe and the word “gay”)</p>	<p>“киселевский, соловьевский, соловьиный, соловушек, скабеева, симонян, габрелянов” (references to state propagandists Dmitry Kiselev, Vladimir Soloviev, Olga Skabeeva, Margarita Simonyan, Ashot Gabrelaynov)</p>
<p>“популист” (populist - blaming Navalny for populism)</p>	<p>“елбасы” (yelbasy - reference to the Kazakh official title "leader of the nation", but commenters use it to refer to the Russian president because of resemblance to curse words in Russian)</p>
<p>“ципсо” (a reference to the organization working for pro-Ukraine political astroturfing)</p>	<p>“срутин” (Srutin - playing with Putin's surname and the word "shit")</p>
<p>“белоленточник” (“white ribbon” - reference to the symbol of demanders for free and fair elections)</p>	<p>“Пу, ПТН, Пыт” (playing with Putin's surname)</p>

Appendix H. Toxicity of comments

I did not replace toxicity scores with other Google Perspective API attributes such as identity attack, insult, profanity, or threat to look at these aspects of incivility. I checked the association between attributes in samples and the correlation was strong (from 0.8 and higher). Thus, I work only with the flagship attribute of Google Perspective API, a measure of toxicity.

Table H1. Example of comments and their toxicity scores according to Google Perspective API

Toxicity score	Original text in Russian	Translation
0.1	беспредел откровенный под прикрытием государства!	evident lawlessness under the cover of the state!
0.2	а что удивляться, что одних воров заменили на других таких же, у них там, в опг, честных людей просто нет. за 20 лет их или убрали, или отняли, или просто отсеяли.	and why be surprised that some of the thieves were replaced by others of the same kind, they simply do not have honest people there, in the organized crime group. in 20 years they were either removed, or taken away, or simply weeded out.
0.3	сегодня утром открыл глаза и подумал, что это дерьмо происходит не на самом деле. такого не может быть в европейской стране 21 века.	I opened my eyes this morning and thought this shit wasn't happening. this cannot be the case in a European country of the 21st century.
0.4	записывайте всех этих негодяев , не забудьте что они делали	write down all these rascals, don't forget what they did
0.5	алексей, а ты не думал, что этот вирус как биологическое оружие изобрел наш гарант, ну не он лично и под его указом, начали с китая, а потом и наших, а то мы твари расплодились не так, как надо им	Alexey, did you think that this virus as a biological weapon was invented by our guarantor [President], well, not he personally, and under his decree, they started from China, and then ours, otherwise we creatures did not breed as they should
0.6	чему удивляться, вся власть дебильная! им в дурдоме место в закрытой палате! голосуем дальше за них!	why be surprised, all power is moronic! they have a place in a madhouse in a closed ward! vote further for them!

0.7	навальный красава собирает явку для кремля а бараны пойдут проголосуют и обеспечит легитимность этим сраным властям!!!	Navalny is the best, he is gathering a turnout for the Kremlin and the rams will vote and will provide legitimacy to these fucking authorities !!!
0.8	навальный, что б ты загрёбся где....-хорошо бы было! достал дрянь брехливая!!!! лохи твои друзья	Navalny, what would you go to the graveyard where- it would be nice! I got the shitty stuff !!!! fuckers your friends
0.9	овца тупорылая. блин, когда их всех поразит огонь людского гнева???	blunt-nosed sheep. Damn, when will they all be hit by the fire of human anger ???
1.0	всех этих поповых да чаек, и всех их родственничков до седьмого колена не сажать надо, а вешать за ноги и пи@дить палками с гвоздями, пока не сдохнут	all these priests and Chaikas, and all their relatives up to the seventh knee should not be jailed, but hung by the legs and beat with sticks and nails until they die

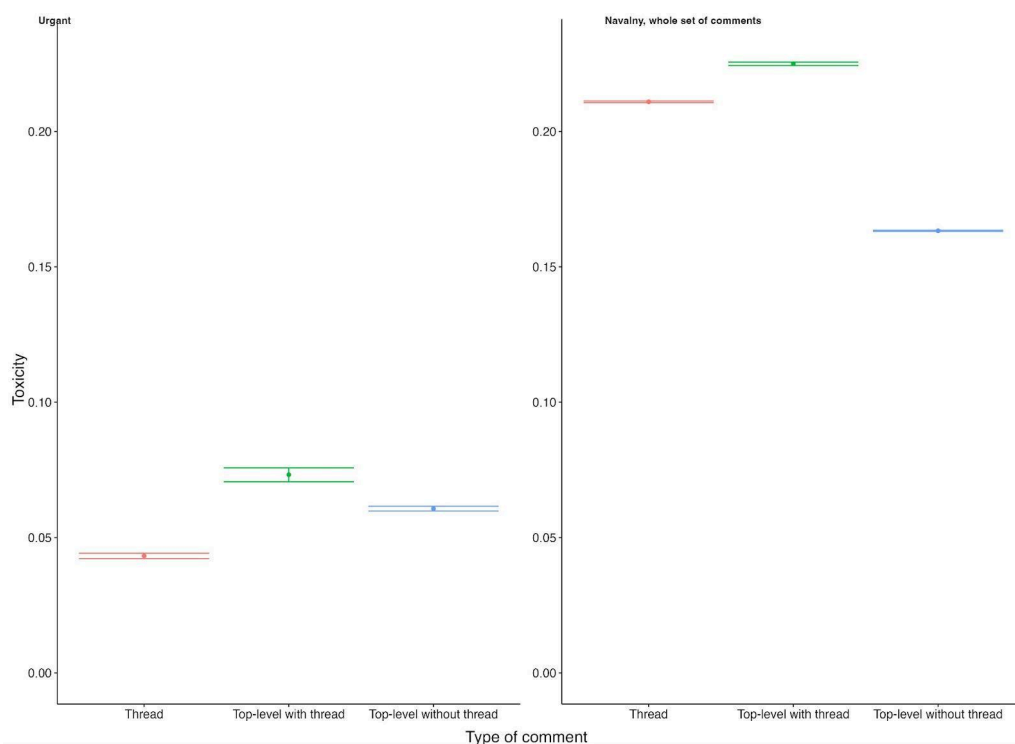


Figure H1. Toxicity in comments of Navalny's YouTube and apolitical - Evening Urgant - channel of three types of comments. The points are colored by the comment category, and error bars indicate the 95% confidence interval of the average toxicity.

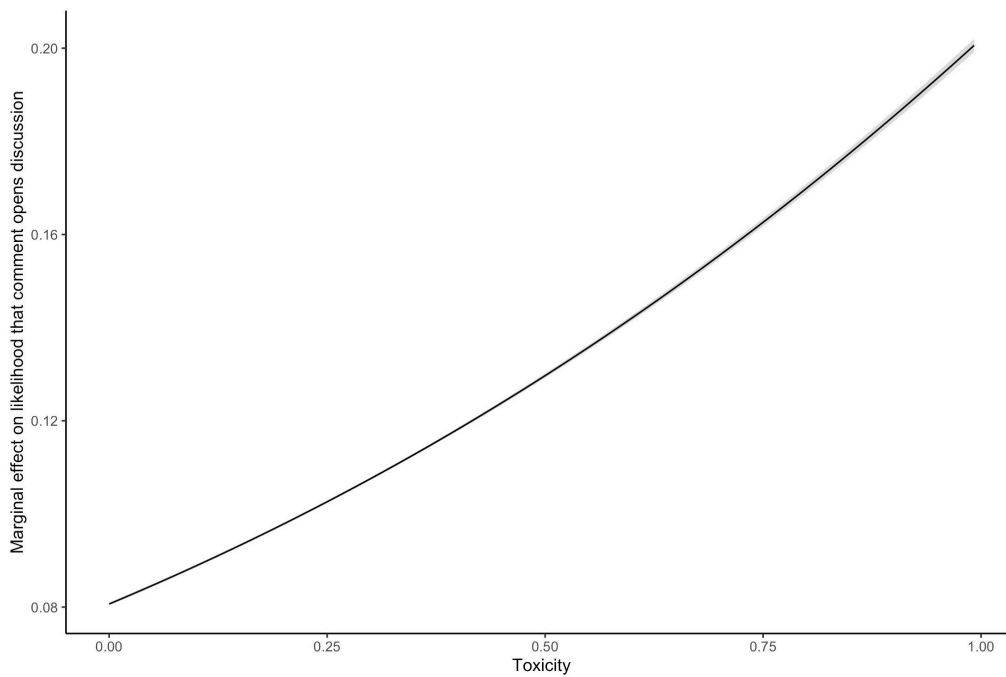


Figure H2. Marginal effects of toxicity on type of comment (logistic regression results where a dependent variable is the change from top-level comment without a thread to having thread), with the 95% confidence interval.

Table H2: Logistic regression results of a top-level comment having thread on toxicity

	Dependent variable:	
	Type of top-level comment: with or without thread	
Toxicity, binary	0.397 (0.022) p = 0.000	0.502 (0.028) p = 0.000
2nd 2 hours		0.067 (0.023) p = 0.004
3rd 2 hours		0.190 (0.021) p = 0.000
4th 2 hours		0.273 (0.031) p = 0.000
5th 2 hours		0.417 (0.031) p = 0.000

6th 2 hours		0.553 (0.054) p = 0.000
7th 2 hours		0.607 (0.060) p = 0.000
More than 14 hours		0.677 (0.080) p = 0.000
Toxicity X 2nd 2 hours		-0.051 (0.019) p = 0.009
Toxicity X 3rd 2 hours		-0.031 (0.025) p = 0.207
Toxicity X 4th 2 hours		-0.035 (0.028) p = 0.209
Toxicity X 5th 2 hours		-0.027 (0.031) p = 0.381
Toxicity X 6th 2 hours		-0.043 (0.034) p = 0.198
Toxicity X 7th 2 hours		-0.078 (0.039) p = 0.049
Toxicity X More than 14 hours		-0.263 (0.025) p = 0.000
Intercept	-2.286 (0.030) p = 0.000	-2.660 (0.028) p = 0.000

Observations	5,966,575	5,966,575
Log Likelihood	-1,896,595	-1,876,954
Akaike Inf. Crit.	3,793,194	3,753,940
Bayesian Inf. Crit.	3,793,222	3,754,158

Note: Video clustered standard errors are in brackets

Table H3: Logistic regression results of a top-level comment having thread on centered toxicity and squared term

	Dependent variable:	
	Type of top-level comment: with or without thread	
Centered toxicity	0.083 (0.012) p = 0.000	0.236 (0.022) p = 0.000
Squared centered toxicity		-0.087 (0.008) p = 0.000
Count of Likes (log)	0.913 (0.016) p = 0.000	0.914 (0.016) p = 0.000
Comment length (log)	0.638 (0.016) p = 0.000	0.612 (0.017) p = 0.000
2nd 2 hours	0.066 (0.035) p = 0.061	0.068 (0.035) p = 0.053
3rd 2 hours	0.138 (0.032) p = 0.00002	0.139 (0.032) p = 0.00002
4th 2 hours	0.235 (0.045) p = 0.00000	0.236 (0.045) p = 0.00000
Fifth 2 hours	0.339 (0.041) p = 0.000	0.340 (0.040) p = 0.000
6th 2 hours	0.448 (0.064) p = 0.000	0.447 (0.064) p = 0.000
7th 2 hours	0.498 (0.071) p = 0.000	0.498 (0.071) p = 0.000
More than 14 hours	0.665 (0.074) p = 0.000	0.661 (0.073) p = 0.000
Intercept	-13.988 (1.003) p = 0.000	-13.896 (1.003) p = 0.000
Video fixed effects included	Yes	Yes
Observations	1,484,752	1,484,752
Log Likelihood	-315,603.9	-315,265.2
Akaike Inf. Crit.	632,029.8	631,354.5

Bayesian Inf. Crit.

637,048.4

636,385.3

Note: Video clustered standard errors are in brackets

Table H4: Regression of the length of discussion threads on top-level comment toxicity

	Dependent variable:	
	The length of thread under a top-level comment (logged)	
Toxicity (binary)	0.012 (0.003) p = 0.00001	0.005 (0.002) p = 0.041
2nd 2 hours		0.004 (0.002) p = 0.155
3rd 2 hours		0.002 (0.003) p = 0.410
4th 2 hours		0.007 (0.003) p = 0.013
Fifth 2 hours		0.010 (0.003) p = 0.003
6th 2 hours		0.015 (0.004) p = 0.0001
7th 2 hours		0.018 (0.004) p = 0.00002
More than 14 hours		0.025 (0.003) p = 0.000
Count of Likes (log)	0.188 (0.003) p = 0.000	0.188 (0.003) p = 0.000
Comment length (log)	0.047 (0.002) p = 0.000	0.046 (0.002) p = 0.000
Toxicity X 2nd 2 hours		0.003 (0.003) p = 0.228
Toxicity X 3rd 2 hours		0.007 (0.004) p = 0.044
Toxicity X 4th 2 hours		0.008 (0.004) p = 0.027

Toxicity X Fifth 2 hours		0.011 (0.005) p = 0.018
Toxicity X 6th 2 hours		0.004 (0.006) p = 0.476
Toxicity X 7th 2 hours		-0.001 (0.007) p = 0.906
Toxicity X More than 14 hours		0.009 (0.005) p = 0.093
Intercept	-0.164 (0.004) p = 0.000	-0.187 (0.005) p = 0.000
Video fixed effects included	Yes	Yes
Observations	1,484,752	1,484,752
R^2	0.350	0.351
Adjusted R^2	0.350	0.351

Note: Video clustered standard errors are in brackets

Table H5: Regression of comments toxicity on the time they were posted, 2-hour intervals

	Dependent variable:	
	Toxicity of a comment	
Intercept	0.154 (0.002) p = 0.000	0.157 (0.003) p = 0.000
Second 2 hours	0.010 (0.001) p = 0.000	0.007 (0.003) p = 0.025
Third 2 hours	0.014 (0.001) p = 0.000	0.017 (0.003) p = 0.00001
Fourth 2 hours	0.016 (0.001) p = 0.000	0.011 (0.004) p = 0.0006
Fifth 2 hours	0.021 (0.002) p = 0.000	0.021 (0.004) p = 0.00000

Sixth 2 hours	0.028 (0.002) p = 0.000	0.031 (0.005) p = 0.000
Seventh 2 hours	0.032 (0.003) p = 0.000	0.033 (0.006) p = 0.00000
After more than 14 hours	0.048 (0.003) p = 0.000	0.038 (0.003) p = 0.000
Thread	-0.021 (0.002) p = 0.000	-0.026 (0.003) p = 0.000
Top-level without thread	-0.058 (0.003) p = 0.000	-0.063 (0.004) p = 0.000
Second 2 hours X Thread		0.006 (0.003) p = 0.040
Third 2 hours X Thread		0.002 (0.004) p = 0.620
Fourth 2 hours X Thread		0.012 (0.004) p = 0.003
Fifth 2 hours X Thread		0.008 (0.004) p = 0.050
Sixth 2 hours X Thread		0.008 (0.005) p = 0.158
Seventh 2 hours X Thread		0.006 (0.006) p = 0.362
After more than 14 hours X Thread		0.007 (0.003) p = 0.035
Second 2 hours X Top-level without thread		0.002 (0.003) p = 0.559
Third 2 hours X Top-level without thread		-0.005 (0.003) p = 0.168
Fourth 2 hours X Top-level without thread		0.003 (0.004) p = 0.361

Fifth 2 hours X Top-level without thread		-0.004 (0.004) p = 0.338
Sixth 2 hours X Top-level without thread		-0.008 (0.005) p = 0.135
Seventh 2 hours X Top-level without thread		-0.004 (0.006) p = 0.506
After more than 14 hours X Top-level without thread		0.013 (0.004) p = 0.002
Video fixed effects included	Yes	Yes
Observations	1,993,172	1,993,172
R^2	0.046	0.047
Adjusted R^2	0.046	0.046

Note: Video clustered standard errors are in brackets

Table H6: Regression of comments toxicity on the time they were posted, 12-hour intervals

	Dependent variable:	
	Toxicity of a comment	
Intercept	0.266 (0.003) p = 0.000	0.264 (0.003) p = 0.000
Second 12 hours	0.025 (0.002) p = 0.000	0.025 (0.003) p = 0.000
Third 12 hours	0.028 (0.002) p = 0.000	0.028 (0.003) p = 0.000
Fourth 12 hours	0.038 (0.004) p = 0.000	0.029 (0.006) p = 0.00000
Fifth 12 hours	0.036 (0.005) p = 0.000	0.026 (0.004) p = 0.000
Sixth 12 hours	0.050 (0.004)	0.024 (0.006)

	p = 0.000	p = 0.00003
Seventh 12 hours	0.045 (0.004)	0.033 (0.005)
	p = 0.000	p = 0.000
After more than 84 hours	0.056 (0.004)	0.036 (0.004)
	p = 0.000	p = 0.000
Thread	-0.022 (0.002)	-0.021 (0.002)
	p = 0.000	p = 0.000
Top-level without thread	-0.058 (0.003)	-0.065 (0.004)
	p = 0.000	p = 0.000
Second 12 hours X Thread		0.002 (0.003)
		p = 0.416
Third 12 hours X Thread		0.001 (0.003)
		p = 0.753
Fourth 12 hours X Thread		0.006 (0.004)
		p = 0.158
Fifth 12 hours X Thread		0.005 (0.004)
		p = 0.200
Sixth 12 hours X Thread		0.018 (0.006)
		p = 0.005
Seventh 12 hours X Thread		0.004 (0.007)
		p = 0.587
After more than 84 hours X Thread		-0.006 (0.003)
		p = 0.049
Second 12 hours X Top-level without thread		-0.002 (0.003)
		p = 0.448
Third 12 hours X Top-level without thread		-0.002 (0.003)
		p = 0.554
Fourth 12 hours X tTop-level without thread		0.010 (0.004)
		p = 0.013
Fifth 12 hours X Top-level		0.011 (0.006)

without thread

p = 0.053

Sixth 12 hours X Top-level
without thread

0.033 (0.007)

p = 0.00001

Seventh 12 hours X Top-level
without thread

0.018 (0.008)

p = 0.024

After more than 84 hours X
Top-level without thread

0.037 (0.005)

p = 0.000

Video fixed effects included	Yes	Yes
Observations	1,993,192	1,993,192
R^2	0.046	0.047
Adjusted R^2	0.046	0.047

Note: Video clustered standard errors are in brackets

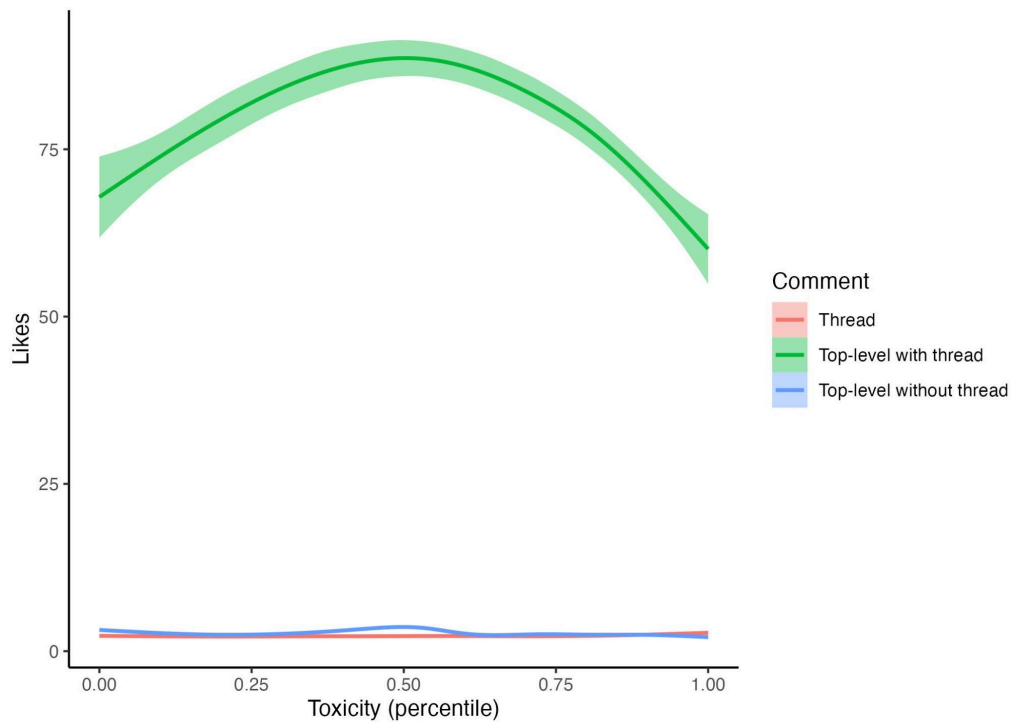


Figure H3. Likes and toxicity score, $n = 7,985,548$ comments. Local polynomial fits of the relationship between comment likes and the percentile of toxicity of comments, with 95% confidence intervals.

Table H7: OLS Regression of time posting on types of commenters and comments

	Dependent variable:	
	Time of posting in 2-hour intervals	
Intercept	9.024 (0.055) p = 0.000	9.250 (0.109) p = 0.000
Prolific commenter (vs. one-off)	-0.602 (0.069) p = 0.000	-0.864 (0.044) p = 0.000
Toxic commenter	0.752 (0.037) p = 0.000	0.542 (0.059) p = 0.000
Thread (baseline:top-level with thread)	0.383 (0.046) p = 0.000	-0.376 (0.095) p = 0.0001
Top-level without thread (baseline:top-level with thread)	-0.773 (0.110) p = 0.000	-0.941 (0.179) p = 0.00000
Prolific X Toxic commenter		0.227 (0.071) p = 0.002
Prolific commenter X Thread comment		0.808 (0.072) p = 0.000
Prolific commenter X Top-level without thread		0.181 (0.086) p = 0.035
Toxic commenter X Thread comment		-0.037 (0.065) p = 0.577
Toxic commenter X Top-level without thread		-0.023 (0.050) p = 0.642

Prolific X Toxic comment X Thread comment		-0.227 (0.077) p = 0.003
Prolific X Toxic commenter X Top-level without thread		0.271 (0.069) p = 0.0001
Video fixed effects	Yes	Yes
Observations	1,979,419	1,979,419
R^2	0.125	0.126
Adjusted R^2	0.125	0.125

Note: Video clustered standard errors are in brackets

Table H8: OLS Regression of time posting on types of commenters and comments

	Dependent variable:	
	Time of posting in 12-hour intervals	
Intercept	8.750 (0.082) p = 0.000	9.123 (0.136) p = 0.000
Prolific commenter (vs. one-off)	-0.583 (0.075) p = 0.000	-0.994 (0.052) p = 0.000
Toxic commenter	0.690 (0.042) p = 0.000	0.589 (0.067) p = 0.000
Thread (baseline: top-level with thread)	0.331 (0.049) p = 0.000	-0.066 (0.139) p = 0.639
Top-level without thread (baseline: top-level with thread)	-0.438 (0.133) p = 0.001	-0.815 (0.200) p = 0.00005
Prolific X Toxic commenter		0.012 (0.067) p = 0.855
Prolific commenter X Thread comment		0.441 (0.106) p = 0.00003
Prolific commenter X Top-level without thread		0.413 (0.084)

		p = 0.00000
Toxic commenter X Thread comment		0.004 (0.062)
		p = 0.944
Toxic commenter X Top-level without thread		-0.100 (0.057)
		p = 0.079
Prolific X Toxic comment X Thread comment		-0.188 (0.085)
		p = 0.027
Prolific X Toxic commenter X Top-level without thread		0.451 (0.070)
		p = 0.000
Video fixed effects	Yes	Yes
Observations	1,979,419	1,979,419
R^2	0.183	0.183
Adjusted R^2	0.183	0.183

Note: Video clustered standard errors are in brackets

Appendix I. Cross-cutting disagreement

Annotation instruction

For this task, we would like to ask you to identify pro-opposition and pro-government comments with strong emotional content, including hate speech and mobilization for collective action.

Pro-government discourse in the comments includes:

- 1 - name-calling/threats against Navalny/opposition;
- 2 - use of curse words;
- 3 - use of emoji and corresponding emoticons;
- 4 - accusations of working for Americans or the West;
- 5 - denial of the significance of the investigation, as opposed to calls to disseminate it from the opposition.

Pro-opposition discourse in the comments includes:

- 1 - Name-calling against Putin and people associated with the regime (for example, propagandists);
- 2 - curses, uncivil sentiment;
- 3 - emotional component (use of emoji);
- 4 - calls to promote the video and talk about the investigation (mobilization of supporters), but there must be an emotional appeal (for example, emojis catch attention, as opposed to a simple “top”); this aspect is also essential to ensure that fewer people follow pro-government propaganda, that is, strengthening the position of the opposition.

In all other cases - the neutral category. In problematic situations, when it is unclear what tone is inherent in the message, the emphasis is on the general context (for example, typical accusations against Navalny that he is using schoolchildren) and the context associated with the discussion itself if the comment was left in the thread.

Table I1: Distribution of comments, ideological stances

	Pro-Government	Neutral	Pro-Opposition
Number	324,44	6,781,026	880,09

Table I2: Comparison of Class affinity model results with Coder 1

	Pro-Opposition	Neutral	Pro-Government
Sensitivity	0.95	0.97	0.97
Specificity	0.98	0.96	0.98

Precision	0.89	0.99	0.71
Recall	0.95	0.97	0.97
F1	0.92	0.98	0.83

Table I3: Comparison of Class affinity model results with Coder 2

	Pro-Opposition	Neutral	Pro-Government
Sensitivity	0.80	0.97	0.88
Specificity	0.99	0.82	0.99
Precision	0.89	0.97	0.73
Recall	0.80	0.97	0.88
F1	0.84	0.97	0.80

Table I4: Distribution of the discussion types that serve as a dependent variable for Hypothesis 2

	No Conversations	Discussion	Attacks on government	Attacks on opposition	Attacks from both sides
Number	5,387,019	418,043	77,177	58,425	24,794

Table I5: Results of multinomial logistic regression of discussion type

	Reference 'No discussion underneath of a top-level comment'	
	Discussion	Attacks on government
Pro-Government (baseline: neutral)	0.545 (0.036) p = 0.000	0.479 (0.048) p = 0.000
Pro-Opposition (baseline: neutral)	-0.400 (0.027) p = 0.000	-0.177 (0.032) p = 0.000
Toxicity (binary)	0.077 (0.019) p = 0.0001	0.244 (0.030) p = 0.000
Comment length (log)	0.634 (0.013)	0.867 (0.021)

	p = 0.000	p = 0.000
Count of Likes (log)	0.855 (0.014)	1.211 (0.019)
	p = 0.000	p = 0.000
Second 2 hours	0.061 (0.028)	0.041 (0.035)
	p = 0.029	p = 0.246
Third 2 hours	0.150 (0.028)	0.102 (0.041)
	p = 0.00000	p = 0.013
Fourth 2 hours	0.234 (0.045)	0.119 (0.050)
	p = 0.00000	p = 0.018
Fifth 2 hours	0.346 (0.042)	0.222 (0.049)
	p = 0.000	p = 0.00000
Sixth 2 hours	0.461 (0.068)	0.376 (0.074)
	p = 0.000	p = 0.00000
Seventh 2 hours	0.539 (0.072)	0.425 (0.064)
	p = 0.000	p = 0.000
After more than 14 hours	0.608 (0.082)	0.473 (0.079)
	p = 0.000	p = 0.000
Intercept (Neutral)	-5.142 (0.043)	-8.351 (0.077)
	p = 0.000	p = 0.000
Akaike Inf. Crit.	3,091,143	3,091,143
Bayesian Inf. Crit.	3,091,497	3,091,497
Observations	5,965,458	5,965,458

Note: Video clustered standard errors are in brackets

Table I6: Results of multinomial logistic regression of discussion type

	Reference 'No discussion underneath of a top-level comment'	
	Discussion	Attacks on opposition
Pro-Government (baseline: neutral)	0.421 (0.039) p = 0.000	1.196 (0.0401) p = 0.000
Pro-Opposition (baseline: neutral)	-0.304 (0.026) p = 0.000	-0.831 (0.045) p = 0.000

Toxicity (binary)	0.077 (0.019) p = 0.0005	0.251 (0.032) p = 0.000
Comment length (log)	0.621 (0.013) p = 0.000	1.003 (0.017) p = 0.000
Count of Likes (log)	0.873 (0.013) p = 0.000	1.173 (0.019) p = 0.000
Second 2 hours	0.068 (0.027) p = 0.010	-0.031 (0.042) p = 0.469
Third 2 hours	0.153 (0.027) p = 0.000	0.059 (0.043) p = 0.168
Fourth 2 hours	0.222 (0.044) p = 0.00000	0.188 (0.063) p = 0.003
Fifth 2 hours	0.324 (0.040) p = 0.000	0.370 (0.064) p = 0.000
Sixth 2 hours	0.449 (0.066) p = 0.000	0.441 (0.092) p = 0.000
Seventh 2 hours	0.522 (0.071) p = 0.000	0.527 (0.079) p = 0.000
After more than 14 hours	0.582 (0.081) p = 0.000	0.660 (0.085) p = 0.000
Intercept (Neutral)	-5.110 (0.043) p = 0.000	-8.813 (0.066) p = 0.000
Akaike Inf. Crit.	3,042,521	3,042,521
Bayesian Inf. Crit.	3,042,875	3,042,875
Observations	5,965,458	5,965,458

Note: Video clustered standard errors are in brackets

Table I7: Results of ordered logistic regression of discussion type

	Dependent variable:		
	Type of discussion		
	Model 1	Model 2	Model
Pro-Opposition (baseline:	-0.299 (0.025)	-0.144	-0.127 (0.028)

neutral)		(0.027)	
	p = 0.000	p = 0.00000	p = 0.00001
Pro-Government (baseline: neutral)	0.510 (0.037)	0.623 (0.038)	0.625 (0.038)
	p = 0.000	p = 0.000	p = 0.000
Toxicity (binary)	0.106 (0.020)	0.106 (0.020)	0.125 (0.022)
	p = 0.00000	p = 0.00000	p = 0.000
Comment length (log)	0.649 (0.013)	0.649 (0.013)	0.648 (0.013)
	p = 0.000	p = 0.000	p = 0.000
Count of Likes (log)	0.893 (0.013)	0.893 (0.013)	0.893 (0.013)
	p = 0.000	p = 0.000	p = 0.000
Pro-Opposition X Toxicity			-0.078 (0.029)
			p = 0.006
Pro-Government X Toxicity			-0.016 (0.030)
			p = 0.600
Second 2 hours	0.055 (0.026)	0.071 (0.023)	0.070 (0.023)
	p = 0.037	p = 0.003	p = 0.003
Third 2 hours	0.132 (0.026)	0.151 (0.024)	0.151 (0.024)
	p = 0.00000	p = 0.000	p = 0.000
Fourth 2 hours	0.193 (0.041)	0.221 (0.040)	0.221 (0.040)
	p = 0.00001	p = 0.00000	p = 0.00000
Fifth 2 hours	0.296 (0.039)	0.326 (0.038)	0.326 (0.038)
	p = 0.000	p = 0.000	p = 0.000
Sixth 2 hours	0.412 (0.062)	0.460 (0.059)	0.459 (0.059)
	p = 0.000	p = 0.000	p = 0.000
Seventh 2 hours	0.480 (0.063)	0.516 (0.064)	0.516 (0.064)
	p = 0.000	p = 0.000	p = 0.000
After more than 14 hours	0.539 (0.074)	0.587 (0.076)	0.586 (0.076)
	p = 0.000	p = 0.000	p = 0.000
Interaction of ideological stance with time	No	Yes	Yes
Akaike Inf. Crit.	3,094,092	3,093,619	3,093,569
Bayesian Inf. Crit.	3,094,282	3,094,000	3,093,978

Observations	5,965,458	5,965,458	5,965,458
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Note: Video clustered standard errors are in brackets

Table I8: Results of ordered logistic regression of discussion type

	Dependent variable:		
	Type of discussion		
	Model 1	Model 2	Model 3
Pro-Government (baseline: neutral)	0.588 (0.035) p = 0.000	0.709 (0.038) p = 0.000	0.709 (0.038) p = 0.000
Pro-Opposition (baseline: neutral)	-0.377 (0.025) p = 0.000	-0.239 (0.025) p = 0.000	-0.226 (0.028) p = 0.000
Toxicity (binary)	0.108 (0.020) p = 0.00000	0.109 (0.020) p = 0.00000	0.122 (0.022) p = 0.00000
Comment length (log)	0.658 (0.013) p = 0.000	0.657 (0.013) p = 0.000	0.657 (0.013) p = 0.000
Count of Likes (log)	0.882 (0.013) p = 0.000	0.882 (0.013) p = 0.000	0.882 (0.013) p = 0.000
Pro-Government X Toxicity			-0.004 (0.031) p = 0.898
Pro-Opposition X Toxicity			-0.061 (0.031) p = 0.047
Second 2 hours	0.048 (0.026) p = 0.070	0.064 (0.023) p = 0.007	0.063 (0.023) p = 0.007
Third 2 hours	0.131 (0.027) p = 0.00000	0.151 (0.025) p = 0.000	0.151 (0.025) p = 0.000
Fourth 2 hours	0.205 (0.043) p = 0.00001	0.231 (0.042) p = 0.00000	0.231 (0.042) p = 0.00000
Fifth 2 hours	0.318 (0.040) p = 0.000	0.345 (0.039) p = 0.000	0.344 (0.039) p = 0.000
Sixth 2 hours	0.423 (0.063)	0.464 (0.060)	0.464 (0.060)

	p = 0.000	p = 0.000	p = 0.000
Seventh 2 hours	0.498 (0.063)	0.527 (0.065)	0.527 (0.065)
	p = 0.000	p = 0.000	p = 0.000
After more than 14 hours	0.562 (0.075)	0.605 (0.076)	0.604 (0.076)
	p = 0.000	p = 0.000	p = 0.000
Interaction of ideological stance with time	No	Yes	Yes
Akaike Inf. Crit.	3,048,914	3,048,543	3,048,514
Bayesian Inf. Crit.	3,049,104	3,048,923	3,048,922
Observations	5,965,458	5,965,458	5,965,458

Note: Video clustered standard errors are in brackets

Structural topic modeling on comments (discussion type as covariate)

This part of the analysis is purely illustrative. Its task is to show which topics appear in the comments sections of Navalny's YouTube channel. I extracted a 10% random sample clustered on the discussion type that occurs under a top-level comment to create a representative corpus of top-level comments that would be tractable with available computing capacities: (1) no conversation; (2) discussion without pro-government or pro-opposition cues; (3) attacks on the government in a thread; (4) attacks on the opposition in a thread; and (5) attacks on both sides in a single thread. This resulted in 510,865 comments, which decreased to 508,330 comments after pre-processing (lemmatization, deletion of stopwords, punctuation, and removal of numbers and words with fewer than three characters). Words that appeared in less than one percent of the comments were also excluded.

There are several options for quantitative estimation to identify the number of topics in the structural topic models. None of them guarantee a proper way to define a correct number of topics. The best option here is to read topics, the words they include, and representative documents. But the quantitative approaches presented below provide an orientation.

70 is the optimal number of topics, according to the metrics incorporated into the R package *LDA tuning*⁸³. Results are presented in Figure 11. *CaoJuan2009* is named after a group of authors who suggested finding a minimum of the average cosine distance of topics as a way to define topics'

⁸³ *ldatuning*: Tuning of the Latent Dirichlet Allocation Models Parameters <https://cran.r-project.org/web/packages/ldatuning/index.html>.

number choice. *Deveaud2014* as metric deals with information divergence between all pairs of LDA topics and maximizes it. *Arun2010* aims to find the minimum in the symmetric Kullback-Leibler divergence of values in topic-word and document-topic matrices outputs of LDA. *Griffiths2004* uses the Markov chain Monte Carlo algorithm and finds the maximum log-likelihood of word occurrence under the given number of topics to define a number of topics to be used in the analysis. So, I find the extrema for corresponding pairs: minimization (*Arun2010* and *CaoJuan2009*) and maximization (*Deveaud2014* and *Griffiths2004*).

Figure 12 (with original Russian words) and Table A18 (translation into English) present the results. It should be noted that automated methods for determining the number of topics are auxiliary by their nature. Their results are not strictly to be followed but serve as a guide for interpretation by a researcher.

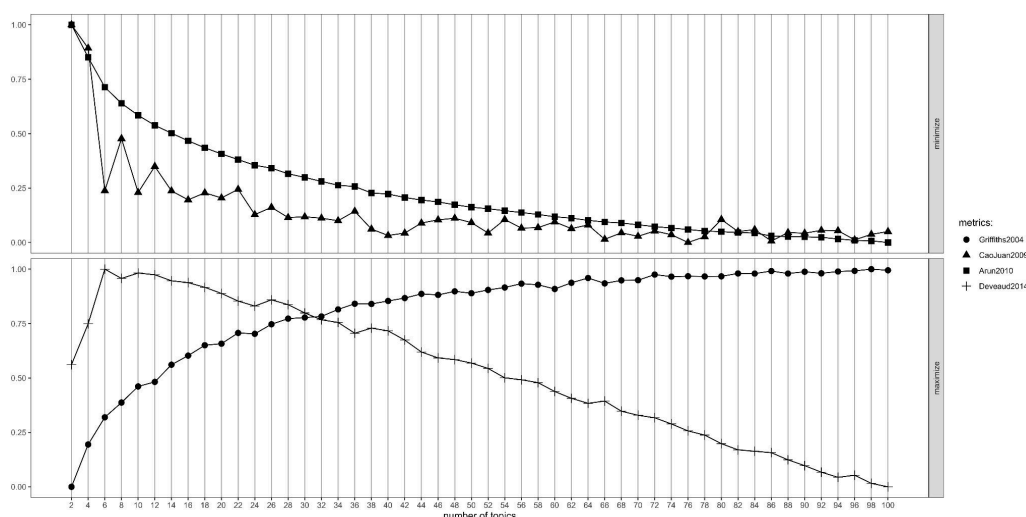


Figure 11. Metrics from LDA tuning

Table 19. Summary of STM, 70 topics

Topic	Summary of topic	7 most frequent words	Share
7	Keeping a video at the top	top, video, comment, hold, up, maintain, share	7,2%
29	Praising Navalny	Navalny, well done, health, keep alive, free, Anatolyevich	6,8%
10	Agree with Navalny	President, become, freedom, handsome, super, lie, agree	3,3%
12	Appeals to comment	comment, press (the like button), future, support,	3,3%

	actively	promotion, indifferent, write (a comment)	
18	Corruption of high-ranking officials	power, to steal, officials, Kremlin, government, imprison, answer	3,1%
60	Promoting videos and smart voting	like (button), video, smart, vote, deliver, write, go forward	2,9%
14	Attacks on Putin	Putin, be afraid, leave, bad, tsar, enemy, palace	2,7%
38	Spread messages about videos	show, YouTube, display, to film, learn, interesting, hooray	2,6%
30	Participation in elections	election, vote, come, honest, move, candidate, go	2,4%
2	Praising Navalny's activity	view, raise, shit, freeze, cool, change, freak	2,4%
32	Video promotion on the platform	trend, support, bot, steam, read, delete, rating	2,2%
65	Social inequality #1	receive, salary, ruble, pension, pay, tax, month	2,2%
56	Rule of law in Russia	court, citizen, Russian, fact, right, accept, constitution	2,1%
17	Corrupted nature of political regime	thief, corruption, crook, Putin, system, prison, regime	2%
41	Commenting on the content of videos	film, direct, history, real, Dimon, awesome, similar	2%
69	Attempts to kill Navalny	kill, try, clean, poison, scary, phone, normal	2%
35	Protest collective actions	go out, rally, revolution, arrange, change, next, gather	1,9%
25	Emotions	complete, occur, regular, represent, horror, shock, ass	1,7%
24	Praising Navalny's team	guys, team, bravo, real, continue, hero, respect	1,6%
51	Discussions about strategy	given, moment, action, political, being, goal, plan	1,5%
53	Medvedev's corruption	answer, Medvedev, Usmanov, personally, dacha, plane, relax	1,4%
49	Quality of investigations	investigation, excellent, level, cool, high, conduct, doctor	1,4%
36	Indiscernible #1	channel, website, subscribe, check, mother, go in, veteran	1,3%
26	Attacks on propagandists #2	scum, the West, corrupt, crush, language, shit, Soloviev	1,3%
46	Poisoning of Navalny	million, thousand, FSB, cowards, cost, billion, dear	1,3%

40	Corruption of high-ranking officials	buy, apartment, build, seriously, red, square, children's	1,2%
37	Indiscernible #2	lead, to like, idea, slave, beautiful, explain, excellent	1,2%
15	Navalny's supporters	believe, give, save, take away, respect, post, supporter	1,2%
44	Indiscernible #3	school, cheat, prohibit, yell, sleep, May, sit down	1,1%
55	State institutions	state, happy, hear, army, leader, general, build	1,1%
59	Help to spread videos	help, tell, problem, help, ask, fully, treat	1,1%
48	Social inequality #2	population, sell, rich, poor, factory, worker, facility	1,1%
11	The case of Sergei Furgal (Khabarovsk krai)	enough, endure, Khabarovsk, return, court, border, grandma	1%
62	Navalny as a traitor	USA, name, offer, America, Europe, study, surname	1%
34	Propagandists	listen, Soloviev, patriot, media, propaganda, others, transmission	1%
39	Regime beneficiaries	ready, die, death, oligarch, scary, conscience, cop	1%
19	Bad governance #2	law, silence, lawlessness, lies, theft, end, reason	1%
68	Indiscernible #4	family, brother, play, son, close, drive, hospital	1%
3	Readiness for the collective action	hope, to succeed, luck, take, right, tomorrow, Petersburg	1%
54	Attacks on Zolotov	God, Zolotov, glory, Lord, debate, store, hang	0,9%
13	Negative emotions	shame, really, ashamed, feeling, lose, scream, hurt	0,9%
8	Indiscernible #5	want, opinion, master, destroy, beautiful, no, point	0,9%
52	Disgusting	stupid, mug, vile, so, call, disgusting, impossible	0,9%
70	Indiscernible #6	start, stay, any, most importantly, turn out, be, possibly	0,9%
43	Metaphorical description of the victory over the authorities	win, victory, begin, justice, good, evil, surrender	0,8%
66	Propagandistic nature of TV	politics, engage, instead, brains, TV, brain, turn on	0,8%
21	Party politics	united, create, party, deputy, mask, thought, in a nutshell	0,8%
16	Navalny's team regional branches	quantity, open, number, grow, headquarters, guy, larger	0,8%
64	Youth	rest, beautiful, only, young, hope, buy, youth	0,8%

58 Indiscernible\#7	find, internet, see, by the way, spend, fuck, believe	0,8%
23 Appeals to change	huge, get up, demand, change, heart, knee, run	0,8%
1 Ukraine	Ukraine, Russian, close, example, news, grab, Crimea	0,8%
28 Indiscernible #8	bad, decide, ask, invent, regret, fuck, blood	0,8%
9 Attacks on Navalny	clown, agent, American, circus, foreign, Western, serious	0,8%
6 Money	earn, collect, sick, pocket, clear, bank, holy	0,7%
47 Indiscernible #9	many, strongly, similar, have to, thing, happen, try	0,7%
5 Indiscernible #10	forget, information, fool, area, camera, grandma, girl	0,7%
45 Indiscernible #11	worthy, for the sake of, drive, high, feeder, ruler, filthy	0,7%
33 Indiscernible #12	grandfather, relative, parent, force, resident, obviously, before	0,6%
20 Regional agenda	region, come, ear, edge, heap, governor, local	0,6%
4 Indiscernible #13	fast, at home, beat, flock, ram, Paris, body	0,6%
61 Indiscernible #14	situation, anyone, funny, funny, scheme, principle, expect	0,6%
27 Indiscernible #15	equal, confident, late, thought, fuck, favor, ghou	0,6%
67 Local unfairness	go, stop, district, spend, security officer, talk, deprive	0,6%
31 Indiscernible #16	pass, mistake, half, issue, difficult, boss, Lenin	0,6%
42 Corruption allegations	allow, alien, go, eat, dump, whole, money	0,6%
63 Indiscernible #17	correct, normal, deserve, fuck, teach, important, obviously	0,6%
22 Indiscernible #18	simple, seek, survive, enough, drink, appeal, fall	0,6%
50 No surprises	honestly, stop, reason, be surprised, surprise, difference, they say	0,6%
57 Reference to the luxurious life of corrupt officials	owner, spit, dog, throw, paper, dog, Shuvalov	0,5%

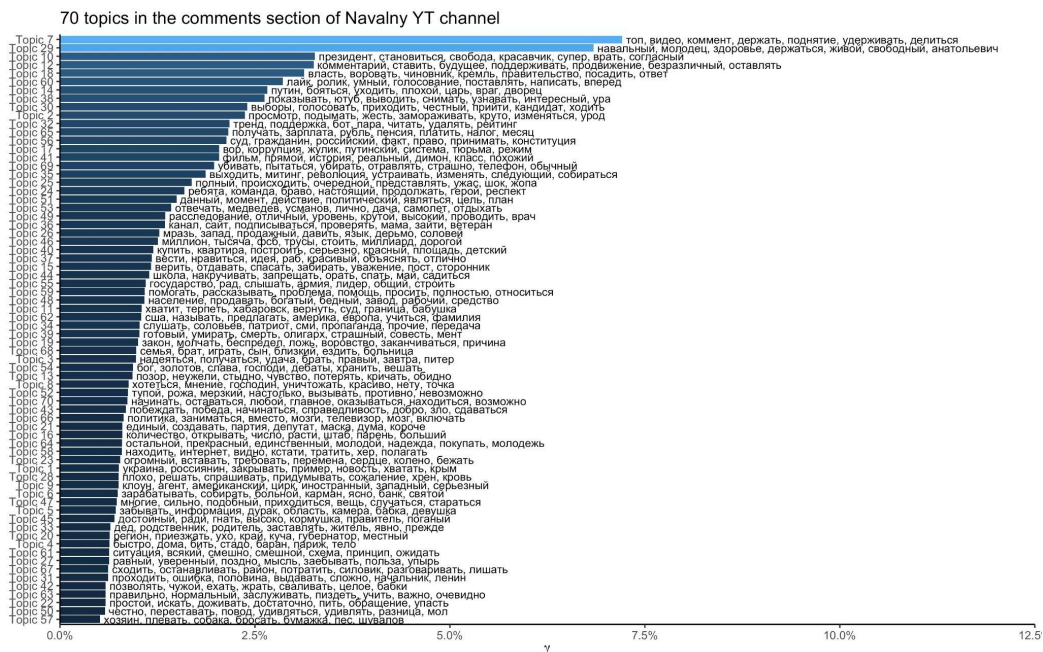


Figure 12. STM topics of comments from the channel of Alexei Navalny (type of discussion as a covariate), $K = 70$, in Russian. Bars indicate the share of a topic in the text corpus.

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