

Mapping the Russian Media Field through Audience Networks and Agenda Choice

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In light of the “gardening” of the public sphere in autocracies, the question of how power is distributed in the media field calls for empirical investigation. We use computational methods of network analysis, topic modeling, and semantic analysis to test if the Russian media landscape is organized around the three “publics” as suggested by earlier theory. Using the data from the media outlets’ public pages on the social network VKontakte and the texts of the publications, we reveal which groups of outlets exist in the media field and compare the similarity in terms of coverage with how the media are seen by the audience. We validate the previously suggested structure of the Russian media landscape. The differentiation among the “publics” is consistently pronounced on the levels of coverage specifics and the audience subscription profiles.

Keywords: media consumption, computational text analysis, network analysis, authoritarianism, audience participation

As in many authoritarian countries (Wright, Scott, & Bunce, 2020), the media system in Russia is increasingly shaped by the government, largely through promoting state-imposed narratives on the TV channels that are consumed by two-thirds of Russians and considered the most trustful news source by half of the population (“Internet, Social Networks,” 2022). The dominating official position is largely considered to directly form citizens’ attitudes, such as the support of the “special military operation,” expressed by the majority of Russians in recent surveys (Kizilova & Norris, 2022). However, qualitative research shows that state narratives might be borrowed to formulate political opinions that are not well-established, and their

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seemingly widespread adoption can be rather shallow (Alyukov, 2022a; Khaldarova & Pantti, 2016). Hypothetically, regular exposure to alternative information might counter the observed effects of propaganda (Alyukov, 2022b).

There are several ways in which media consumers can encounter alternative viewpoints. One is by actively searching for news online—yet, in Russia, online news aggregators are found to reverberate state-imposed narratives by silencing critical views (Alyukov, 2021). Another way is through social media. Although users are likely to create filter bubbles by selectively subscribing to a limited range of sources (Cinelli, De Francisci Morales, Galeazzi, Quattrociocchi, & Starnini, 2021), it is not necessarily so (Bakshy, Messing, & Adamic, 2015). There is evidence that consumption repertoires can include a diversity of sources (e.g., Mukerjee, Majó-Vázquez, & González-Bailón, 2018) and that on social media, there are higher chances of incidentally encountering diverse political and ideological views (Masip, Suau, & Ruiz-Caballero, 2020; Wojcieszak, Menchen-Trevino, Goncalves, & Weeks, 2022).

To date, there has been little data-driven research on the shape of the Russian media ecosystem both on the level of outlet reachability by the audience and in terms of coverage specifics. Existing empirical studies that address the consumption repertoires of Russians are either limited to TV channels (Dokuka, Koltcov, Koltsova, & Koltsov, 2018) or derive insight from qualitative data (Alyukov, 2021). We used large-scale digital trace data of media subscriptions to VKontakte (VK) to derive the relative positions of outlets with regard to audience attention. We further conducted computational text analysis and determined whether these results could be reconciled with coverage differences among media. In doing so, we aimed to provide a baseline for further research tracing the dynamics of the media landscape as it experiences political and legislative shocks such as the legal bans on a wide range of independent media in 2022 (“Russia: With War,” 2022).

Background

The Russian Media Field

The public sphere in nondemocratic countries is usually conceptualized in terms of discrete categories where the outlets can be allocated—for instance, mainstream/official, liberal/oppositional, business, and social media types (Toepfl, 2011). Such analytical typologies imply the substantial difference in coverage among groups of media, whether in terms of agenda choice or in terms of framing of the same topics. However, to the best of our knowledge, this assumption has not yet been tested empirically.

In Russia, mainstream and official media, primarily owned by the state or the power elite groups close to the state, have a wide audience base. Television consumption, which is the largest share of the overall media consumption, mostly exposes people to the state narratives (Degtereva & Kiriya, 2010; Schimpfossil & Yablokov, 2014) as from the 2000s, even the previously independent channels like NTV were taken under the state control (“Government Takes Russia’s,” 2006). Besides, some of the outlets, though formally independent, might reinforce similar agendas and framing. There can be many “news websites which are aligned with the state without being obviously controlled or owned by it” (Szostek, 2018, p. 82).

Still, there are media outlets independent from the state, under the control of different elite groups (Kiriya, 2019), that broadcast liberal-oppositional content (Toepfl, 2011). Though they are characterized as serving the information needs of a very narrow and secluded group of socially active people (Degtereva & Kiriya, 2010), some of them have a noticeable audience on social media and are popular according to the media rankings ("Federal Media," 2020).

Yet these independent outlets operate in an increasingly repressive political environment, where "gardening" techniques (Litvinenko & Toepfl, 2019) are used to moderate the extent to which these sources are critical of the regime. Over the last two decades, some of the outlets endured the forced change of ownership, dismissal of editors, and restaffing of the political desks; journalists from independent media were arrested or involved in court processes, expelled from the country, attacked, or murdered ("12 Newsrooms," 2016; "A glance," 2018; Roth, 2021). The 2017 law on "foreign agent media" entailed not only the loss of sponsors but also distrust toward the outlets recognized as such because of an intrusive and discrediting disclaimer that needed to be put on all the content (Kim, 2021; Roth, 2021). In 2022, many Russian media outlets' websites were blocked because they allegedly disseminated "false information" (primarily about the "special military operation"), and a law was passed, which simplified the procedure of revoking media licenses in such situations ("Russian Duma Passes," 2022, para. 11).

It can be hypothesized that in the face of repressions, even those media outlets that were not closed down could change the coverage specifics and the audience base (Toepfl, 2020). In the next section, we review the theoretical mechanisms that show the complexity of these processes and the variety of actors involved.

Positioning in the Media Field

To form expectations on how the outlets are positioned in and navigate the media landscape, we used the lens of organizational field theory. It implies that the strategies of organizations in the same sphere are interdependent and views social life as structured through relationships and interactions among social actors at the macro-level (Kluttz & Fligstein, 2016). Organizational actors gain influence by taking up and maintaining important positions in this relational space—for example, the position of a broker (Fligstein, 2001). Strategically maneuvering in the field and occupying such positions requires taking into account the strategies and positions of other actors. In the media field specifically, the delineation among positions was considered to appear through the translated content or more specifically agenda-setting and framing (Szostek, 2018).

According to other theorists, organizational entities interact not only among themselves but also with their audiences. Their attention is a strategic resource that the field actors hoard to win better positions in the field (Fligstein & McAdam, 2011, 2012). A part of the strategy is framing, that is, the formation of meanings and identities that the audiences can share and adopt (Kluttz & Fligstein, 2016). In the hybrid media environment, an important manifestation of audiences' engagement is subscriptions to news outlets' Web pages on social media platforms.

We find a similar focus in Toepfl's (2020) theory of different "authoritarian publics" as "constellations of three key elements: participants, environments, and discursive practices" (p. 2), where participants are understood as media organizations, journalists, and the audience. The author distinguishes three publics based on the specifics of their discourse: uncritical, where the regime is not criticized; policy-critical, where lower-level officials or institutions are criticized; and leadership-critical, where top-rank political leadership is also criticized. Based on that, we expected to find the differences in coverage at the level of frames used by the media outlets and see if the groups of outlets arising from these differences were consistent with the allocation of audiences' attention derived from subscription patterns.

At the same time, media readers are not expected to align strongly with one frame or discourse, and they can strategically organize exposure to diverse media sources. It was found by media scholars that the audience of the outlets is not coherent and neither are people's repertoires of consumption (Crilley, Gillespie, Vidgen, & Willis, 2022). These findings are in line with the audience-centric approach, which derives connections among media outlet Web pages from the extent to which the same audiences consume pairs of media outlets together (Mukerjee et al., 2018; Taneja & Wu, 2014; Webster & Ksiazek, 2012). The outlets that share a lot of subscribers could be considered more similar in terms of their publics, their appeal, and hence their power, which stems from the occupied position in the field. This approach leads us to not only focus on the groups of media with similar coverage specifics and devoted secluded audiences but also pay attention to which outlets occupy broker positions among "publics," as this might indicate an alternative source of power in the media field.

Data

The questions that we asked required the analysis of news outlets' discourse, which we aimed to conduct based on the texts of publications, and the analysis of how audiences' attention was allocated among the outlets. The latter question was answered using the data on news outlet subscriptions in the largest Russian social media, VK.²

² There is widespread concern that VK is under the control of the government in Russia, and therefore data from VK may appear to have limited credibility. One reviewer noted that "VK is under the control of political power and contributed to some illiberal actions of the Russian government (such as eliminating appeals for anti-governmental social movements)." This may be true in the current political conditions in Russia, but our observations of VK activities during 2017–2020 show that in those years political posts were not censored and attracted many VK users. During those years, calls for anti-government demonstrations were not removed from the platform, and they received about 10 times more likes and followers than similar calls on Facebook. It appears that VK was the most important medium for social movements with pro-democracy (e.g., local election observer groups) and anti-government sentiments until 2022, when the government effectively purged all such activities from public forums. Thus, we have reason to believe that up to the time of our study, VK was seen as a widely used public arena for media of all persuasions.

We defined our sample of the Russian media outlets based on their popularity according to the Medialogia citation indices in August 2020 ("Federal Media," 2020). The agency separately ranked³ TV channels, radio stations, newspapers, magazines, news agencies, and digital-born outlets by their citations in the media and social media. In each category, Medialogia chose the most prominent outlets by both media and social media citations. We combined all these rankings to form an initial list of outlets. From there, we excluded most of the outlets that were not news-focused (e.g., *Popular Mechanics*, *Cosmopolitan*) though several entertainment-oriented and thematic outlets were retained to validate further analysis (e.g., *National Geographic Russia*, *GQ*). We mostly selected federal media and excluded local outlets (e.g., *Taiga Info*, *Moskvich Mag*) so as not to encounter the clustering based on regional grounds (Taneja, 2016; Wu & Ackland, 2014). Together, the outlets from the rankings constituted the preliminary sample.

We then searched for the public Web pages of the type "media" in the largest Russian social media, VK. From the search results, we manually selected the news-related outlets that were not included in the Medialogia rankings (e.g., *Lentach*, *PostNews*). At the same time, we deleted from the initial sample the outlets that did not have the established minimum of 25,000 subscribers (e.g., *Trud*, *The Bell*) or did not have a VK Web page (e.g., *Ytro News*).

Using the VK application programming interface (v. 5.72) through the *vkR* package (Sorokin & Antonov, 2020), in September 2020, we exported the lists of subscriber IDs. Two outlets (*Novaya Gazeta* and *Pravda.ru*) had their follower lists closed and hence were removed from the analysis. After that, we had 62 outlets in the sample, including both legacy and digital-born media.

We processed the subscriber ID lists to find the number of shared subscribers between each pair of media sources. Then, individual subscriber data were discarded and only the aggregate numbers were used in the analysis.

Additionally, we searched for the texts published in these outlets between May 1, 2020, and September 30, 2020. As the media agenda was dominated by COVID-19 throughout 2020, the time frame was chosen to eliminate the potential differences in thematic profiles related to the unstable coverage of the topic of COVID-19 and its social implications since our preliminary analysis showed that the topic's presence was not well-established in all the media before April 2020. To retrieve the publications, we used Public.Ru, a full-text Russian media database. The full volume of publications during this period was available for 18 of 62 outlets. Though this selection was narrow, subsequent analysis showed that all parts of the media field were well-represented by this sample, and within the resulting groups of media, these sources provided a balanced set in terms of background (digital-born vs. legacy) and popularity. The resulting corpus

³ The proprietary media citation index reflects the number of mentions of the outlets' materials within Medialogia's database that encompasses over 58,000 media sources, including all types of legacy media, Internet media and blogs. Citations by news aggregators, as well as regular and exceptionally massive cross-citations, are excluded from the index composition. The proprietary social media citation index reflects the number of links to the media outlets' materials posted on users' pages on four social media platforms: Twitter, Facebook, VK, Odnoklassniki, the last two being the largest social media websites in Russia.

included about 218,000 texts. They were preprocessed by removing all the punctuation, numbers, and stop words, lemmatizing, and retaining only nouns.

See the full list of media outlets, their Web pages, VK audience counts, and the number of publications retrieved in Tables A1 and A2 in the appendix.

Methods

Audience Overlaps

We processed the subscriber ID overlaps between media public Web pages in VK as a measure of the extent to which users simultaneously exposed themselves to each pair of outlets (Dokuka et al., 2018; Mukerjee et al., 2018; Taneja & Wu, 2014). In line with the audience-centric approach (Webster & Ksiazek, 2012), the fact of including two outlets in the media diet signals that there is an association between these outlets in the eyes of readers, and the more frequently the combination occurs, the stronger the link. As the lists of subscribers were large, we found that any two outlets were connected in the network, with audience overlaps as small as 215 users (between Ridus and TV 78) and as large as 272,260 users (between Life.ru and RIA Novosti). For the overlap values to reflect the genuine strength of connection, we additionally normalized them by the number of followers of both Web pages using the Jaccard similarity coefficient (Tanimoto, 1958):

$$K_j = \frac{c}{a + b - c}$$

where a is the total number of followers of one outlet, b is the total number of followers of another outlet, and c —the number of shared followers between these outlets.

Using Gephi visualization software (Bastian, Heymann, & Jacomy, 2009), we built a network of media outlets where the strength of the edges reflected the normalized number of shared followers of the VK Web pages.

We calculated node betweenness centrality with *tnet* R package (Opsahl, 2020). The metric is indicative of the extent to which nodes are positioned at the interface between two clusters and act as bridges connecting the parts of the network that would be disconnected otherwise (Newman, 2010). We used the formalization by Opsahl, Agneessens, and Skvoretz (2010), which allowed us to take into account edge weights and, through this, the relative volumes of the audience that “flows” through the paths between the outlets.

While betweenness centrality was calculated on a full network to reflect the actual space of consumption, to identify clusters in the media field we additionally built the backbone version of the network (Majó-Vázquez, Nielsen, & González-Bailón, 2019; Serrano, Boguñá, & Vespignani, 2009). The backbone identification algorithm filters the network so that only those edges remain whose strength is significantly ($p \leq .05$) higher than the expected node-level average, corresponding to a case when the outlet is equally

strongly related to all of its alters. Here, simple counts of shared followers were used as edge strengths, as required by the algorithm. Nodes that were related to all other nodes with equal strength were not included in the network. Hence, the backbone graph consisted of 59 nodes and 177 edges (vs. 62 nodes and 1,891 edges in the full network). A radio station, Golos Ameriki, and two smaller TV channels, OTR and RTVI, were automatically excluded.

Both versions of the network were then clustered using the Louvain algorithm for the network partition (Blondel, Guillaume, Lambiotte, & Lefebvre, 2008) to identify the groups of nodes that were more tightly connected among themselves than to other nodes. As expected, the backbone version had a higher modularity, indicating a more pronounced cluster structure (Table 1).

Table 1. Statistics for the Audience Overlap Network, Before and After Backbone Extraction.

Network	# of Nodes	# of Edges	Max. Degree	Min. Degree	Avg. Degree	# of Clusters	Modularity (Range Across 100 Algorithm Runs)	Density
Backbone network	59	177	48	1	6	3	0.335–0.364	0.103
Full network	62	1891	61	61	61	6	0.23–0.244	1

Coverage Specifics

We operationalized differences in coverage specifics as consistent usage of different frames when covering the same issues. Frames are selected aspects of a situation that are made more salient in the text “to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation” (Entman, 1993, p. 52). This definition orients us toward problematic social issues where responsibility can potentially be assigned in multiple ways. Following the publics theory (Toepfl, 2020), we expected to see the liberal-oppositional media define problems as systemic and blame the top-rank authorities for causing them. Other types of media, we assumed, would define problems as local, blame the local authorities, and morally judge the opposition if relevant.

Applying computational methods to extract frames is a challenging task (Maher, 2010). It is unclear to which extent “the constructs generated by [. . .] computational tools are actually frames, in the sense used by manual frame analysts” (Nicholls & Culpepper, 2021, p. 160). Returning to the aforementioned definition of a frame by Entman (1993), we surmised that if the results of the analysis provided a way to infer how the problem was defined in a publication and who bore the responsibility for it, at least candidate frames could be nominated. Words indicating moral judgments, if present, would allow the further clarification of these candidate frames.

To identify the issues that could be differently framed, we used topic modeling. A run of the correlated topic modeling algorithm (i.e., structural topic modeling without covariates) as implemented in the *stm* R package (Roberts, Stewart, Tingley, & Benoit, 2020) suggested that the optimal number of topics

for our corpus was 80, and we built a latent Dirichlet allocation model using *mallet* Python package (McCallum, 2002) with the same number of topics.

Since frame extraction methods work better on a highly focused corpus (Nicholls & Culpepper, 2021), we imposed a high threshold of 30% on the presence of a topic in the publication to form sub corpora mainly devoted to the target topic.

Following the definition of a frame, we chose some distinctly problematic topics of domestic social and political life where we expected to find both the definition of a problem and the allocation of responsibility for it. In the period that we considered, the biggest domestic problem on the agenda was COVID-19, in particular the topic of incidence. This issue had national scope, so it potentially engaged the national authorities and could show to what extent the outlets were leadership-critical. At the same time, we assumed that the diversity of vocabulary, if present, could result not from the difference in frames but merely from the diversity of regional cases covered in the publications. Hence, we added two other topics about spatially confined events: the Khabarovsk protests and the Norilsk oil spill.

The first local topic was devoted to the events in the Khabarovsk region, taking place from July 11, 2020, to January 23, 2021. The region's governor, Sergei Furgal, was arrested and accused of being involved in several murders and attempted murders of entrepreneurs in the early 2000s. Furgal pleaded innocent to the charges and considered the process as politically motivated. After his detention, mass protests erupted in the region ("Anti-Kremlin Protests," 2020; "Russia: Huge Protests," 2020).

The second local topic is about a large oil spill that happened in Norilsk in May 2020. A fuel tank owned by a subsidiary of Norilsk Nickel (Nornickel) corporation failed, flooding the local rivers with diesel oil and causing substantial damage to the ecology. According to Nornickel chief executive officer (CEO) Vladimir Potanin, the disaster happened because of thawing permafrost that caused the collapse of the fuel tank's foundations. However, the corporation was criticized for not replacing the worn-out equipment in time (Kireeva, 2020) and had to pay a large fine.

To find differences in the coverage of these topics,⁴ we selected the method developed by Jockers and Mimno (2013) to analyze the lexical specifics of the texts. We grouped the media outlets based on the clusters received from the audience overlap network. In each group, we composed the sub corpora of publications devoted to the topics COVID-19 spread, Khabarovsk events, and the Norilsk oil spill. Then, weighted log odds were computed for each word in the publications. The weighting was required to account for the imbalance in the number of publications on the topics in the two groups of outlets (e.g., the topic Norilsk oil spill was covered in 385 publications in one group and in 827 publications in another). Weighted log odds is a group-specific metric that reflects how likely the word is to appear in a group while accounting

⁴ This stage of the analysis uses the data of topic modeling, with the texts of publications available as bags of nouns. As we saw this as a potential limitation on the clarity of frames—for example, moral judgments might not be accessible in the absence of qualifying adjectives (Maher, 2010)—we also repeated the analysis on the full lemmatized texts with no part-of-speech filtering and found no substantial improvement in the interpretability of the results.

for sampling and usage variability (Monroe, Colaresi, & Quinn, 2008). The resulting data consisted of words, their group labels, and the corresponding weighted log odds. To generate confidence intervals, a random permutation test was conducted. One hundred data sets were generated where the group labels were reassigned randomly for words, and the same metric was calculated on these data. When the empirical weighted log odds metric appeared within the range of the generated values, it meant that there was no difference in relative usage of the word by the two groups of outlets. We skimmed through the publications to ensure that these words were used in topic-relevant contexts.

Results

Audience-Based Network of Media Outlets

The resulting network based on the audience overlaps, where the tie strength reflected the normalized number of shared followers of media pages VK, is presented in Figure 1. The size of nodes is proportional to their betweenness centrality: The larger the nodes, the more important they are as brokers among clusters. The backbone version is in Figure 2, with the node size proportional to the number of VK subscribers and tie strength showing the actual number of shared subscribers. It shows three clusters, while the full network disintegrates into six communities, adding more nuance to the cluster solution.

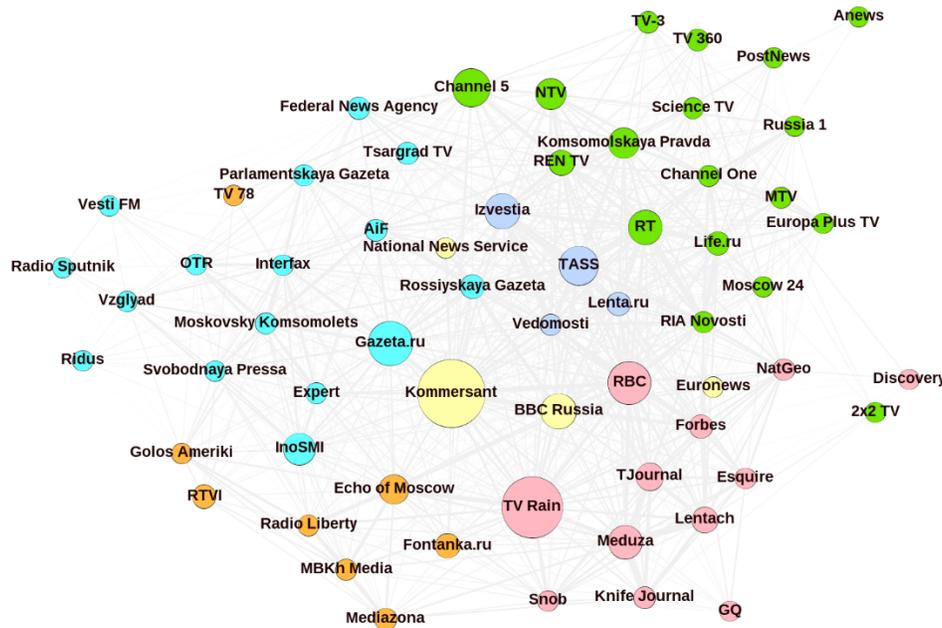


Figure 1. Russian media field—full network based on the outlets’ audience overlaps.

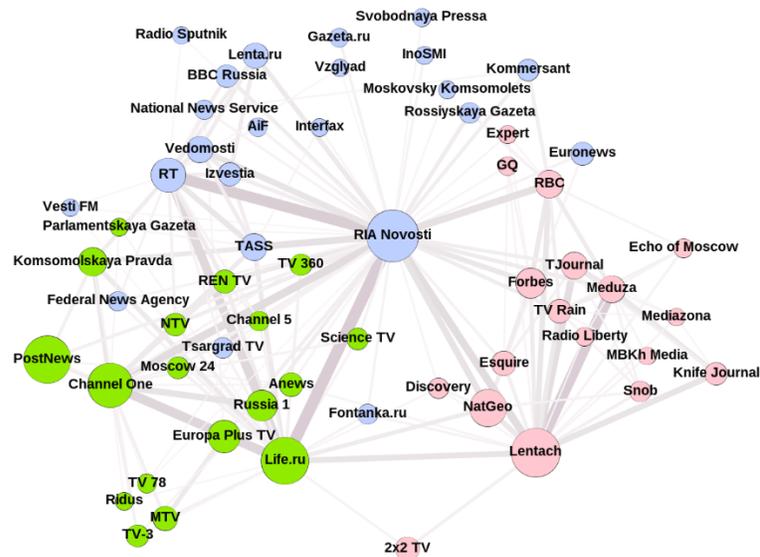


Figure 2. The backbone of the Russian media field network.

The bottom part of the full network in Figure 1 almost fully corresponds to the right part of the backbone version in Figure 2, comprising the outlets that belong to the liberal-oppositional type in Toepfl's (2011) classification or can be deemed as centers of leadership-critical publics (Toepfl, 2020). In the full map, they are split into two clusters, which seems to reflect the more politicized or critical content of some outlets (e.g., Mediazona, which focused on investigating the cases of citizens' persecutions, Radio Liberty, Golos Ameriki, Echo of Moscow) and less politicized content of others (Esquire, *Snob*, Lentach). Still, the second cluster includes Meduza and TV Rain (Dozhd), which are leadership-critical. Two upmarket newspapers *RBC* and *Forbes*, which were leadership-critical but are now considered policy-critical (Litvinenko & Toepfl, 2019), also belong to this cluster. Both clusters include the outlets that are currently listed as "foreign agents" and outlets blocked as of July 2022 (see also Figures A1 and A2 in the appendix). Among the members of these communities, TV Rain, *RBC*, Meduza, and to a lesser extent Echo of Moscow scored high on betweenness centrality, which can be interpreted as a sign that they were followed by more diverse publics.

The second large community in the upper part of the backbone version of the network (Figure 2) encompasses three clusters in the left and central parts of the full map. We considered it to be the center of policy-critical publics with occasional inclusions of uncritical ones, for example, centered around *Rossiyskaya Gazeta*, covering legislative and administrative aspects of state affairs. Two clusters in the center of the full map (Figure 1) include outlets such as *Kommersant*, formerly a liberal business daily now controlled by a pro-Kremlin oligarch ("Pressure at Top," 2019), and Lenta.ru, a digital-born news outlet, which has allegedly moved from organizing leadership-critical publics to being a center of policy-critical publics when its editorial team was replaced in the mid-2010s (Toepfl, 2020). The same transition was

experienced by Gazeta.ru from the cluster in the left part of the full map in Figure 1. The policy-critical cluster also includes the news agency TASS and upmarket and middle-market newspapers (*Moskovsky Komsomolets*, *Argumenty i Fakty*, Interfax). *Kommersant*, *Izvestia*, Gazeta.ru, TASS, BBC Russia, and InoSMI show very high betweenness centrality, with *Kommersant* being the node with the highest betweenness centrality in the whole map.

Finally, the left part of the backbone network in Figure 2 corresponds to the right side of the full map in Figure 1 and mostly consists of the mainstream or uncritical media: television channels, tabloids (*Komsomolskaya Pravda*, Life.ru), and niche entertainment media. Channel One is predictably found here, but it does not have a high betweenness centrality, unlike Channel 5.

Of the nodes whose cluster belonging is notably different between the two versions of the map, Russia Today and the news agency RIA Novosti, which appear in the last cluster in Figure 1, are placed in the policy-critical cluster in the backbone version in Figure 2. The policy-critical cluster also includes an Orthodox channel Tsargrad TV with a conservative ideological leaning. This might indicate that there is not that pronounced a cleavage between the two clusters, but rather the outlets differ in the degree to which they are uncritical of the regime.

See Table A1 in the appendix for the list of all nodes in each cluster with their betweenness centrality scores.

Media Groups' Coverage Specifics

As we witnessed a pronounced boundary between the supposedly leadership-critical and policy-critical media at the level of the audience attention, we chose these two groups to check if the differences remained at the discursive level in the direction predicted by the authoritarian publics theory. We selected several outlets that belonged to two respective clusters in the backbone network. For the time being, they will be referred to as "liberal" and "mainstream" outlets and observed to determine whether their coverage specifics support their typization as leadership-critical and policy-critical.

The liberal group included TV Rain, Radio Liberty, Mediazona, RBC, and *Forbes*; the mainstream group included Lenta.ru, Vesti FM, Vzglyad, *Izvestia*, *Moskovsky Komsomolets*, and Svobodnaya Pressa. We did not include *Kommersant* in the mainstream camp as it was distinctly separated from both camps in the full version of the network and also had the highest betweenness centrality, acting as a broker between the two publics. *Rossiyskaya Gazeta* was excluded from the mainstream group at this stage of analysis because it was an official publisher of the Russian government, and therefore in our view was misplaced as policy-critical. All the other outlets were not considered as they were a part of the "uncritical" cluster in the backbone network.

The comparison of words overused by the two groups of outlets when describing the three topics is presented in Figures 3 to 5. The generated data points stemming from randomly shuffling the group labels are in gray, while the real data points are yellow for the liberal group and blue for the mainstream group.

On the x axis, weighted log odds values are located, and the figures show the top-20 words that are comparatively more likely to appear in the texts of one group of outlets.

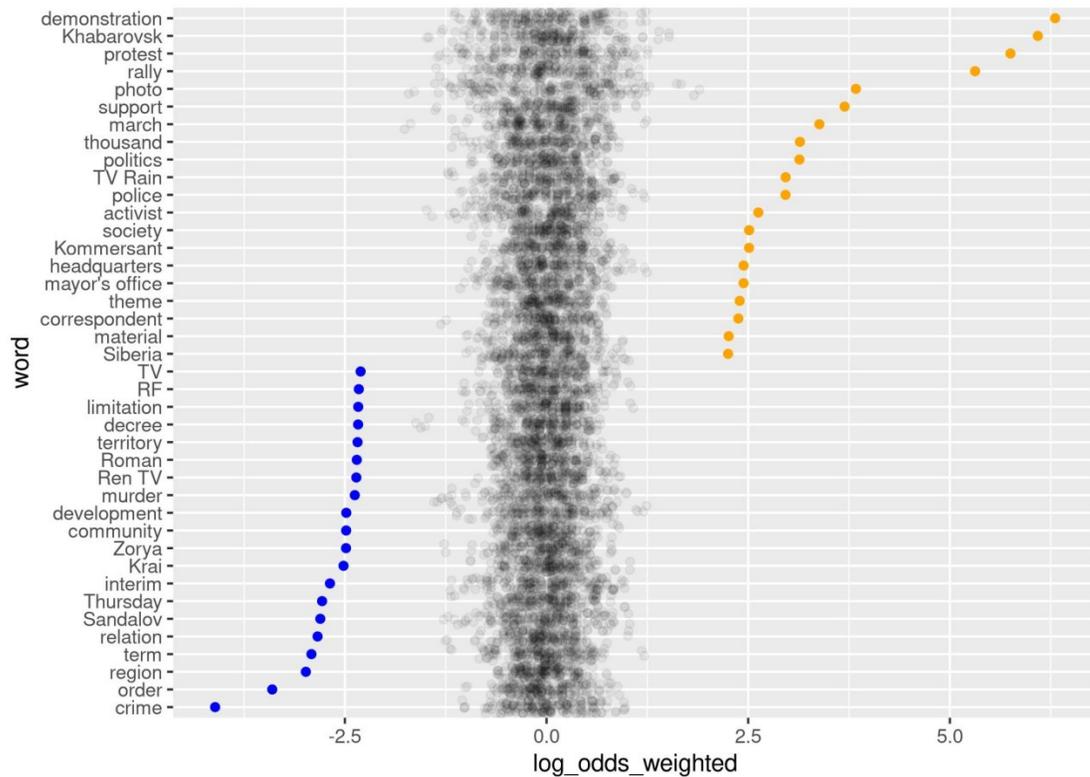


Figure 3. The most typical words describing the topic Khabarovsk events in the liberal (yellow) and mainstream (blue) groups of media outlets.

Figure 3 shows that, compared with the liberal media outlets, the mainstream ones were statistically more likely to use the words related to the accusations against Furgal: *crime, order, murder, Roman Sandalov*, and *[Evgeniy] Zorya* (alleged victims of Furgal). References were made to Furgal's position as a state official and the administrative aspects of the case: *region/krai/territory, R[ussian] F[ederation], term, interim [Governor], decree*.

Outlets from the liberal group were more likely to use words related to the public reaction to Furgal's arrest: *demonstration/protest/rally/march, support, activist, society, police*. The term *politics* was also present as an indicator not of the administrative but of the political side of the process, and other political actors were mentioned, such as *[Navalny's] headquarters*. Interestingly, in this cluster, terms related to the empirical data gathering were significantly more used, such as *photo, thousand [of protesters], correspondent, material*.

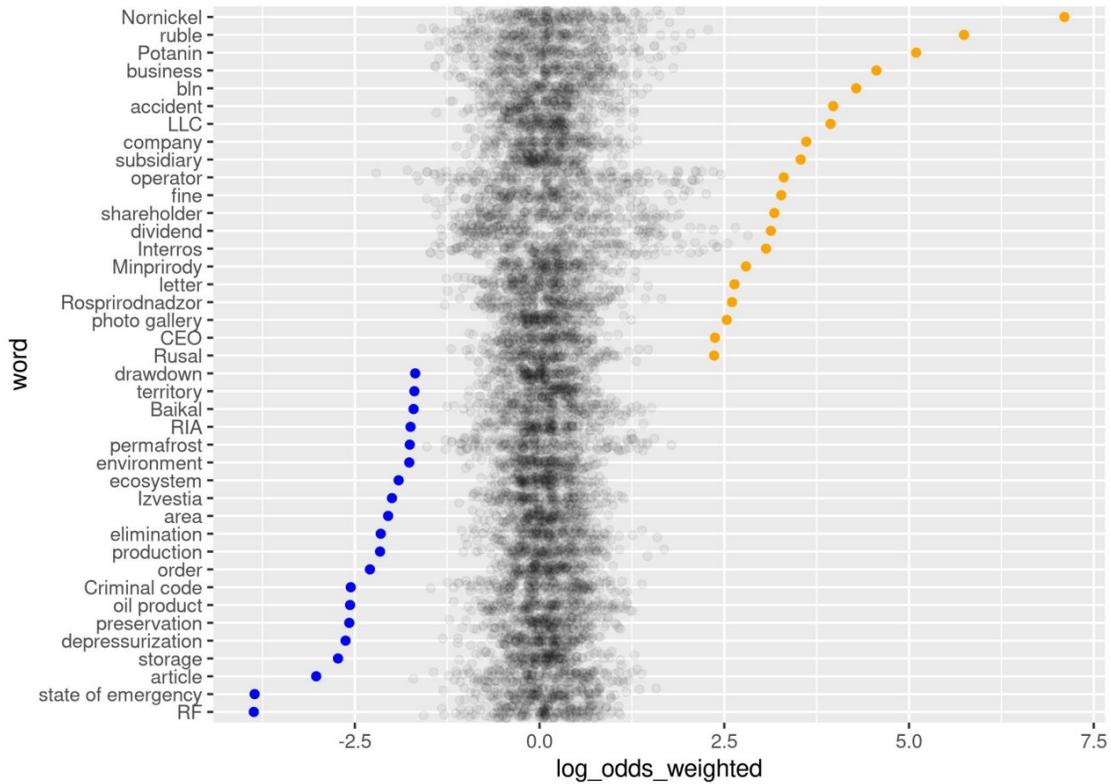


Figure 4. The most typical words describing the topic Norilsk oil spill in the liberal (yellow) and mainstream (blue) groups of media outlets.

Figure 4 shows that when describing the Norilsk oil spill, mainstream outlets focused more on the technical aspects of the accident, highlighting these with specific terminology: *storage*, *depressurization*, *oil product*, *drawdown*. Also covered were ecological consequences—*ecosystem*, *environment*, *permafrost*, *Baikal*—and the measures taken to handle the accident: *state of emergency*, *elimination*.

The liberal cluster, in contrast, almost exclusively wrote about the business aspects of the case: *Nornickel*, *CEO*, *Potanin* (CEO of Nornickel), *subsidiary*, *operator*, and the economic consequences: *ruble*, *billion*, *fine*. This was quite expected given that the group of media included business editions *RBC* and *Forbes*, among others. Here, governmental agencies were also mentioned from this perspective: the Ministry of Natural Resources and Environment (*Minprirody*) and the Federal Service for Supervision of Natural Resources (*Rosprirodnadzor*), which imposed a large fine on Nornickel.

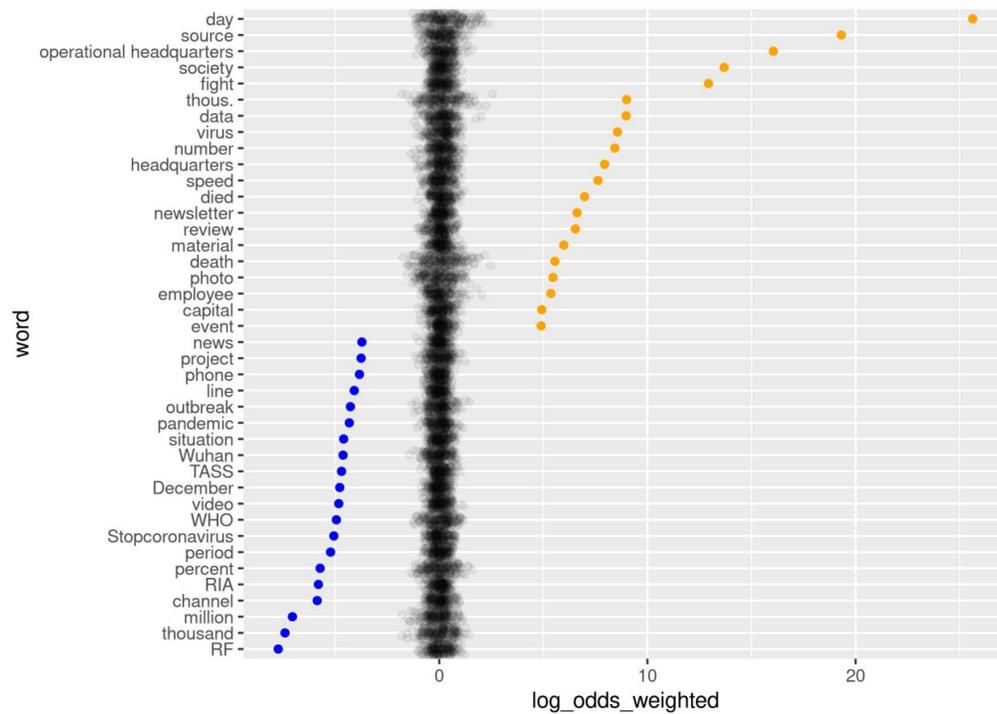


Figure 5. The most typical words describing the topic COVID-19 spread in the liberal (yellow) and mainstream (blue) groups of media outlets.

On the topic of COVID-19 spread, Figure 5 shows high values of log odds in the liberal cluster for terms associated with the daily data on incidence: *day*, *source*, *operational headquarters*, *data*, *number*. Words such as *speed* and *fight* hint at the predominant coverage of the dynamics of COVID-19 spread; words such as *died* and *death*, indicating the COVID-19 death toll, were much more frequently used in this cluster.

In contrast, the mainstream cluster engaged more with the COVID-19 topic as a static phenomenon, its history (*Wuhan*, *December*), and status (*WHO*, *pandemic*). *Percents* were used more here than in the liberal cluster, and *millions*, that is, the scale of incidence (or global death toll), was referred to more frequently.

The cases that we considered here suggest that mainstream media in Russia amplify the “official” frames to address the events as the allocation of responsibility follows the version of the authorities. In the Khabarovsk case, the version of the court was apparently discussed more in the mainstream cluster. In the liberal cluster, the subtopic of the society’s response to the process was highlighted, contrasting with the apparent strategy of the mainstream media to cover only those aspects of the events that do not shift the focus from the official state position.

However, while highlighting the processual details related to Furgal’s court case is in line with the presumed orientation toward criticizing local authorities, in the Norilsk case, no similar trend was found. The

focus on ecological aspects of the event and the usage of jargon in the form of verbal nouns further blurred the responsibility for the accident. We found no evidence that any political actor was criticized in this cluster, yet corporate actors were addressed where relevant. Though it does not follow unequivocally from our results, this might indicate “blaming the system” for financially motivated safety neglect, which allowed the accident to happen.

Finally, when covering a wider topic of COVID-19 spread, no critique of the local actors was evident from our results. Nevertheless, the liberal cluster was focused more on the day-to-day dynamics of the virus spread. This implies more attention to the governmental mitigation-oriented interventions and the resulting mortality rates, which were substantially related to the situations in the hospitals. In this indirect way, we can assume that this group focused on policy-critical narratives. The mainstream cluster seemingly downplayed these aspects, disproportionally discussing COVID-19 as a global phenomenon coming from abroad. Again, we saw no indication of the critique of how the pandemic was handled by the authorities.

Conclusion and Discussion

The analysis of media consumption patterns in VK largely supports the previously suggested analytical split into three large groups of outlets (Toepfl, 2020). A pronounced liberal-oppositional section, which unites two groups of presumably more and less critical outlets, is integrated into the consumption repertoires through TV Rain, *RBC*, Meduza, and to some extent Echo of Moscow. A substantial but less internally cohesive part of the landscape hosts the outlets with oppositional backgrounds that were in the past pressured to turn less critical (Litvinenko & Toepfl, 2019), as well as the ones that were pro-governmental from the start. The last segment of the media system includes state-owned mainstream outlets, either pro-governmental or not politically oriented at all.

The nodes with the highest betweenness centrality on the map either are liberal (TV Rain, *RBC*) or were liberal before (business newspaper *Kommersant*, upmarket medium Gazeta.ru). These outlets act as brokers among different groups of audiences (Majó-Vázquez, Cardenal, Segarra, & de Simón, 2020), likely because the frames used by these outlets are accepted by more than one group.

As the dynamics of the Russian media field included a range of transitions from the liberal to the mainstream cluster, we focused on the current differences in the discourse between the policy-critical and leadership-critical groups. In neither of them did we notice positive messages about the regime, a trait of uncritical publics. What policy-critical media do instead is blur the responsibility for problems and focus on the problems themselves. When doing so, the outlets use jargon (Norilsk case) and make references to the global nature of the problem (COVID-19 spread), which might be aimed at distracting the readers from personally relating to problems. Political actors are mentioned only when they are held responsible in the official discourse (Khabarovsk case). In this way, policy-critical outlets are not in fact critical when it comes to social and political processes if it is not a part of the state-promoted agenda, which puts this “public” closer to the uncritical one than to the leadership-critical one.

Leadership-critical media do not avoid discussing how citizens experience the problems (Khabarovsk, COVID-19 cases) and seem to blame the system that is conducive to the appearance or

aggravation of these problems (Norilsk, COVID-19 cases). Discussing political discontent predictably distinguishes them from policy-critical outlets. Still, our data do not show that the media in this cluster disproportionately attack the political elites, while the economic ones can be targeted (Norilsk case). A part of this public's strategy to secure the audience's attention and trust might be creating a profile of "objective reporting" by presenting empirics such as photos and numbers.

From the methodological standpoint, we suggest a research strategy of empirically deriving "partial publics" as a complement to the close observation method suggested earlier to distinguish them (Toepfl, 2020). Still, when considering frames, we had to refer to the publication texts as the method we used did not allow us to capture the context of word usage, which is crucial for frame identification. Even with this reservation, we suggest treating our results as provisional and replicating the analysis for other periods and larger groups of media.

A more substantial limitation follows from the fact that we captured only a part of the news consumers' interests in Russia by limiting the analysis of audience attention to VK subscription patterns. While looking at the website visit data is potentially more representative of the actual structure of media consumption, it is still mediated by the ranking algorithms used in search engines, and in the Russian case, news aggregators are found to make state-controlled sources more visible and hide websites that present alternative agenda (Daucé & Loveluck, 2021; Kravets & Toepfl, 2021).

The biases that the reliance on social media data introduces are partly known. Though this number is growing, by 2022, less than half of Russians use social media to get political news, while only 17% trust social media the most as a source of news. It was shown that the part of the media field that exists outside the premises of social media likely revolves around state narratives, which helps people accept them as they find consistency between what is written in apparently independent sources (Alyukov, 2021). Therefore, we might assume that people who do not use social media for news more likely consume uncritical outlets. As Alyukov (2021) finds out, people with the "digital-oriented" repertoire of consumption, who access news outlets from social media, are younger and have stronger political views. As more diverse media diets might accompany higher interest in politics (Dubois & Blank, 2018), we might therefore overestimate the power stemming from the structural position of the leadership-critical publics and of brokers that connect these publics with the rest of the field.

Finally, we know little about the interplay between the Russian media outlets' social media presence and the preferences of VK users toward conspicuous media consumption. As outlets might rely on social media traffic to different extents, what they share on social media might not completely reflect the coverage profiles that we revealed, and in the case of this mismatch, reading an outlet's materials elsewhere might not translate to subscribing to its VK Web page. Additionally, not all users might be inclined to publicly disclose their full media diet. Therefore, the map arising from the composition of subscription profiles possibly does not fully reflect the real structure of readers' attention—yet to the best of our knowledge, there is no evidence to inform how this might have biased our conclusions.

With all these reservations, we suggest our research is the first empirical attempt to reveal the structure of the Russian media field. A potential direction to make this analysis more comprehensive would be

to include other types of publics' participants, such as government officials, opposition activists, and ordinary citizens, as these actors can act as the sources of information together with institutionalized media outlets. Finally, we anticipate longitudinal studies where the dynamics of the publics' relative power will be traced as the media field undergoes external shocks, and citizens have to adjust their media diets when consuming certain outlets becomes hard or impossible. We hope that our results can serve as a baseline for such research.

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Appendix

Table A1. Media Outlets Data and Network Position.

Media Outlet	# VKontakte Subscribers (as of October 2022)	Media Type	Position in the Full Network		Cluster in the Backbone Network
			Cluster	Betweenness Centrality	
Anews	494,327	Internet resource	6	0	0
<i>Argumenty i Fakty</i>	140,048	Newspaper	5	2	2
BBC Russia (currently blocked in Russia)	422,034	Internet resource	3	25	2
Channel 5	213,898	Television channel	6	29	0
Channel One	1,997,280	Television channel	6	1	0
Discovery Channel (currently not broadcasting in Russia)	234,448	Television channel	6	0	1
Echo of Moscow (currently blocked in Russia)	153,455	Radio station	2	15	1
Esquire (no longer published in Russia)	551,824	Magazine	1	1	1
Euronews (currently blocked in Russia)	447,634	Internet resource	3	0	2
Europa Plus TV	1,113,682	Television channel	6	0	0
<i>Expert</i>	69,560	Magazine	5	1	1
Federal News Agency	176,571	Internet resource	5	3	2
Fontanka.ru	230,819	Internet resource	2	7	2
<i>Forbes</i>	927,695	Magazine	1	5	1
Gazeta.ru	142,822	Internet resource	5	40	2
Golos Ameriki (currently blocked in Russia)	26,239	Radio station	2	0	-
<i>GQ</i> (currently not published in Russia)	149,021	Magazine	1	0	1
InoSMI	82,728	Internet resource	5	19	2

Interfax	40,995	Informational agency	5	1	2
<i>Izvestia</i>	431,208	Newspaper	4	25	2
Knife Journal	400,608	Internet resource	1	2	1
<i>Kommersant</i>	333,979	Newspaper	3	79	2
<i>Komsomolskaya Pravda</i>	832,120	Newspaper	6	17	0
Lenta.ru	612,998	Internet resource	4	5	2
Lentach	2,303,613	Internet resource	1	9	1
Life.ru	2,189,289	Internet resource	6	5	0
MBKh Media (currently blocked in Russia)	70,606	Internet resource	2	1	1
Mediazona (currently blocked in Russia)	49,752	Internet resource	2	3	1
Meduza (currently blocked in Russia)	726,701	Internet resource	1	22	1
<i>Moskovsky Komsomolets</i>	42,491	Newspaper	5	1	2
Moscow 24	357,553	Television channel	6	0	0
MTV	538,846	Television channel	6	1	0
<i>National Geographic Club</i> (currently not published in Russia)	1,463,140	Magazine	1	2	1
National News Service	172,913	Internet resource	3	0	2
NTV	410,714	Television channel	6	17	0
OTR	29,491	Television channel	5	1	-
<i>Parlametskaya Gazeta</i>	55,283	Newspaper	5	2	0
PostNews	2,195,504	Internet resource	6	0	0
Radio Liberty (currently blocked in Russia)	118,116	Radio station	2	1	1
<i>RBC</i>	773,369	Newspaper	1	37	1
REN TV	204,764	Television channel	6	8	0
RIA Novosti	2,524,586	Informational agency	6	2	2
Ridus	42,302	Internet resource	5	0	0
<i>Rossiyskaya Gazeta</i>	284,769	Newspaper	5	6	2
Russia Today	1,259,855	Television channel	6	23	2

RTVI	29,874	Television channel	2	5	–
Russia-1	1,006,672	Television channel	6	0	0
Science TV	327,107	Television channel	6	1	0
<i>Snob</i>	298,151	Magazine	1	0	1
Radio Sputnik	39,455	Radio station	5	0	2
Svobodnaya Pressa	80,113	Internet resource	5	0	2
TASS	705,108	Informational agency	4	31	2
TJournal (currently blocked in Russia)	705,456	Internet resource	1	12	1
Tsargrad	263,860	Television channel	5	3	2
TV-3	371,263	Television channel	6	2	0
TV-360	348,923	Television channel	6	3	0
TV 78	146,732	Television channel	6	0	0
TV Rain (Dozhd) (currently not broadcasting in Russia)	477,746	Television channel	1	68	1
<i>Vedomosti</i>	683,147	Newspaper	4	1	2
Vesti FM	33,435	Radio station	5	0	2
Vzglyad	29,027	Internet resource	5	0	2
2×2 TV	523,990	Television channel	6	0	1

Table A2. Publications in the Media Outlets.

Media Outlet	# Publications Retrieved	% Share of the Whole Corpus
Lenta.ru	37,138	17
<i>Izvestia</i>	30,767	14
Vzglyad	24,193	11
<i>RBC</i>	20,294	9
<i>Parlamentskaya Gazeta</i>	20,278	9
Fontanka.ru	17,378	8
<i>Kommersant</i>	15,085	7
Ridus	10,838	5
Svobodnaya Pressa	9,965	5
<i>Rossiyskaya Gazeta</i>	6,160	2
RTVI	4,433	2
Radio Liberty	4,079	2
Golos Ameriki	3,616	2
Vesti FM	3,509	1
<i>Moskovsky Komsomolets</i>	3,071	1

<i>Forbes</i>	2,346	1
Mediazona	2,338	1
<i>Komsomolskaya Pravda</i>	1,995	1

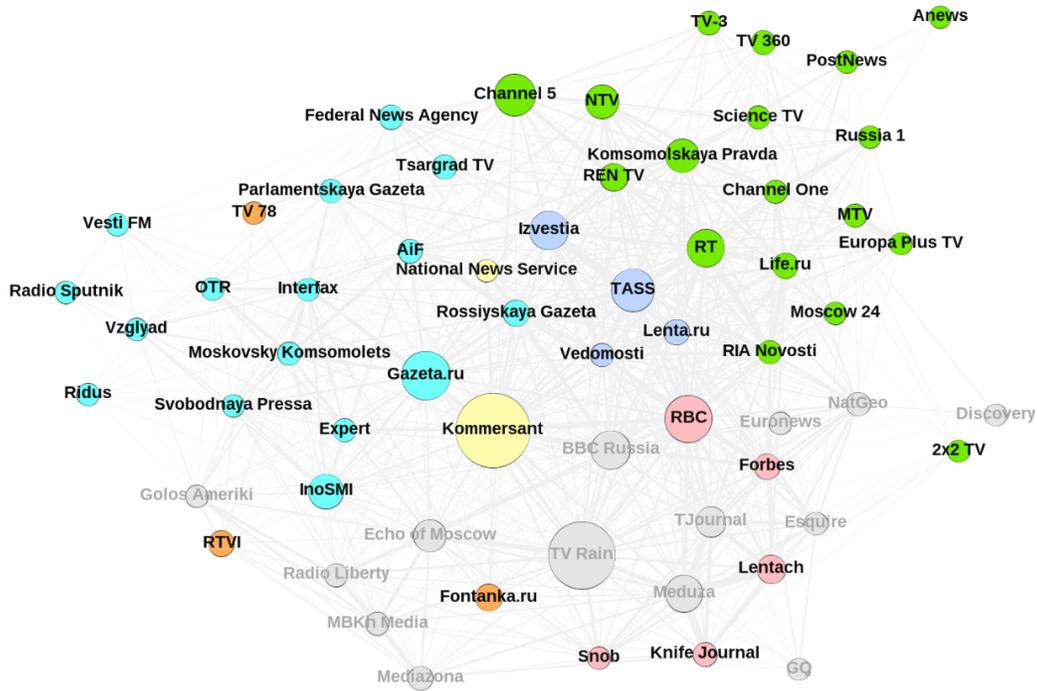


Figure A1. The Russian media field, divided into communities based on the outlets' audience overlap (outlets that were blocked or went off air in Russia as of July 2022 are shown in gray).

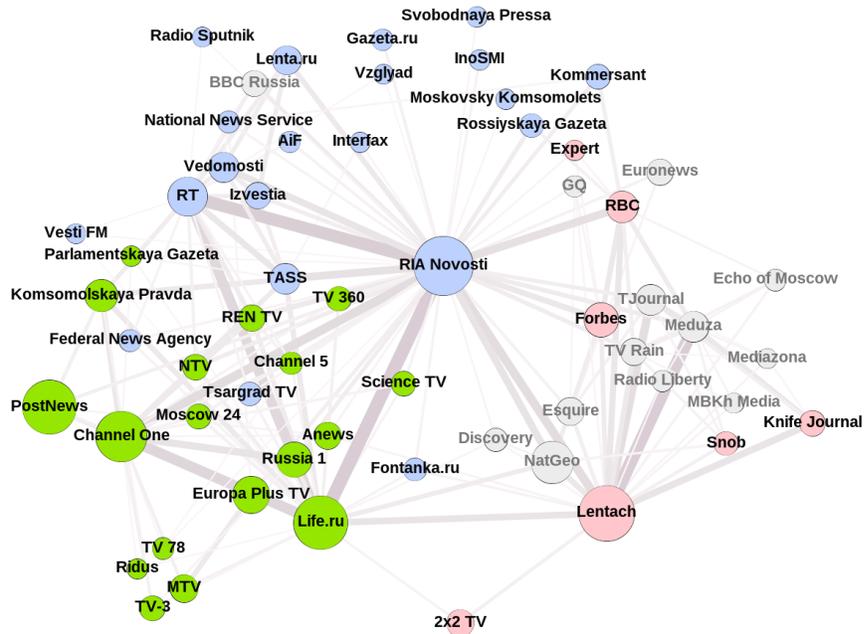


Figure A2. The backbone of the Russian media field, divided into communities, node size corresponds to the number of subscribers (outlets that were blocked or went off air in Russia as of July 2022 are shown in gray).