Online Supplementary Material

A1. Data Collection Procedure

General remarks: Defining the scope of state narratives can be a challenge. State narratives could include speeches by leaders, media coverage from the most authoritative outlets, or, more broadly, everything from central and local state-affiliated media. In this study, we defined state narratives based on news articles from mainstream mass media at the central level based on the following considerations: First, the selected state media sources are both representative and widely accessed, which provides a more comprehensive representation of state discourses, as authoritarian regimes consider these media outlets as crucial to their propaganda strategy. Second, this approach aligns with our investigation's objective of understanding how the state communicates with domestic rather than international audiences, so we excluded English channels of the Chinese and Russian governments like People's Daily Overseas Edition, CGTN and RT. For the Russian case, we also excluded two prominent newspapers with large circulation (i.e., Vedomosti and Kommersant) because they have a somewhat more ambiguous stance toward the regime. For both countries, we used keywords to exclude news related to international sports.

We set a time frame of one year from the full-scale Russian aggression against Ukraine on 24 February 2022 and collected a total of 58,254 news articles/statements from the Chinese perspective and 34,205 on the Russian side. Since our keywords were broad, the dataset included some domestic news articles containing the bloc-building keywords. For the Chinese dataset, we removed this 'noise' by fine-tuning a pre-trained news article classification model with 95% accuracy performance and narrowed the pool down to 11,047 news articles. Then, we manually inspected every document to ensure it would fit our research scope and eventually had 7,954 cases for China and 23,654 cases for Russia. The use of the aggression as the starting point for our investigation is driven by, first, the fact that the block-building narratives in both East and West became much more prominent after the war started and second, because the war is likely to exacerbate the differences in narratives and, for China, create a particular challenge of "selling" the cooperation with Russia at the same time maintaining the commitment to sovereignty as the main principle in the propaganda.

China: In China, the mainstream media at the central level play a pivotal role as primary channels for the public to access both domestic and international news. These media outlets are not only significant for their widespread reach but also serve as the most representative and authoritative sources for understanding the stances and viewpoints of the top authorities. To this end, our research involved collecting data from state-controlled newspapers that operate under the leadership of the Central Committee of the Communist Party of China (CPC), the State Council, and the Central Propaganda Department of the CPC. This includes prominent publications such as the People's Daily, the Global Times, Xinhua News, and Guangming News. We utilized the [China Core Newspapers Full-text Database](#), employing a keyword search methodology for data collection (for detailed information on the keywords used, refer to Supplementary Material A2). Television, another critical mass media channel, significantly shapes public opinion in China. In this regard, we focused on collecting data from Xinwen Lianbo, one of the most popular state-sponsored television programs. We developed a web crawler to aggregate all news articles broadcast by this program from the official website https://tv.cctv.com/lm/xwlb/, applying

keyword-based filtering to refine the dataset. Furthermore, the spokespersons of the China Foreign Ministry play a crucial role in influencing public perception of international dynamics and China's foreign policy direction. Recognizing this, we also developed a web crawler to systematically collect all news releases from the [official website of the China Foreign Ministry](). This approach allows us to comprehensively analyze how China's foreign policy is communicated to the public.

Russia: Most people in Russia get their information from television news, which is why our primary data source was news articles published on official websites and aired by the three most popular Russian news channels, Channel One (*Pervy Kanal*), Russia 1 (*Rossiya 1*), NTV. The data was collected in the following way:

1. **First Channel:** Channel One archives published news articles on the following website: [https://www.1tv.ru/search/news](). The website contains a search engine that allows you to search for articles by keywords. Also, each article is accompanied by tags. To avoid being included in the sample of articles that mention this or that country, but which is not directly related to international relations, we used two tags with which Channel One marks articles related to international relations and foreign countries: "international relations" (*mezhdunarodnyye otnosheniya*) and "in the world " (*v mire*). Further, for each collected article from our sample, we matched the name of the country, its capital or leader (prime minister or president) and, if the article contained one or more mentions, we included this article in our sample;

2. **Russia 1:** If a news article touches on a topic related to a particular country, then Russia 1 marks such articles with the appropriate tags. Accordingly, for each country in our sample, we searched for the corresponding tag and collected all articles marked with this tag. Access to all news articles can be obtained through the search engine of the website of the Vesti program, which is the leading news program of the Russia 1 TV channel: [https://www.vesti.ru]();

3. **NTV:** As in the case of Russia 1, if a news article is partly or wholly devoted to a particular foreign country, NTV marks this article with the corresponding tag. For each country in our sample, we searched for relevant tags and collected all available articles. Access to NTV news articles can be obtained through a search engine on the official NTV website: [https://www.ntv.ru]()

A somewhat less popular source of information among Russians is newspapers. Nevertheless, in order to study in more detail the representation of foreign states and the topics they cover in the context of international relations, we diversified our sample with news articles from the most popular Russian newspapers. Our sample includes articles from the following Russian newspapers: Komsomol Truth (*Komsomolskaya Pravda*), *Izvestia,* Moscow Komsomolets *(Moskovskij Komsomolets), Russian Gazette (*Rossiyskaya Gazeta*), and Arguments and Facts (Argumenty i Fakty)*. All articles were collected from the [Integrum]() database, which is one of the largest data repositories for Russian media. Unfortunately, Integrum does not provide thematic tags, but simply displays all the articles that mention this or that country. This leads to the fact that the sample may include articles in which, for example, Germany is indirectly mentioned, but the article itself is devoted to LGBT laws in Russia. That is, the article is devoted to Russian domestic policy, and not to Germany, which does not correspond to our research task. Therefore, two teaching assistants and one member of the writing team, who are native Russian speakers, manually reviewed all the articles received from Integrum, removing those that did not directly relate to international politics.

A2. Keywords for Identifying Bloc Building in State Media Coverage

The keywords listed in Table 1 were used to pinpoint media coverage related to bloc building. The keywords selection strategy is twofold. First, we used a series of keywords of individual states and regional institutions. The "entity_keywords" category encompasses several groups. It includes China, Russia, and the regional institutions they dominate, like "Beijing," "China," "Russia," "Moscow," and "BRICS." In addition, the category includes the states considered long-standing allies of these two countries, such as "Kazakhstan," "Vietnam," and "Iran." Furthermore, there are states that have an ambiguous alignment with various blocs, like "Israel," "Turkey," "Brazil," "India," "Argentina," and "Hungary." Lastly, this category also captures countries and regional institutions that China and Russia view as rivals: "USA," "Germany," "Great Britain," "Poland," "Italy," "France," "Finland," "Sweden," "Finland," and "NATO."

Second, we used a set of single keywords to identify bloc-building materials. This set, termed 'single_keywords,' included terms such as "sanctions," "blockade," and "decoupling." These terms were selected for their direct relevance to the processes and phenomena of bloc building, enabling us to focus on the most pertinent sources.

We recognize that while a keyword-based approach is effective in many respects, it may not capture all the relevant content related to bloc building. Indeed, authoritarian regimes often employ more colloquial, relatable language in their state-controlled media to achieve broader and more effective dissemination of their messages. For instance, Chinese state media may use terms like "小圈子'"(small circle) or "阵营对抗" (camp confrontation) as indirect references to bloc building rather than more formal language terms like "脱钩" (decoupling). To mitigate this issue, we have supplemented our keyword methodology with a word-embedding approach. Word embeddings are a type of word representation that allows words with similar meanings to have similar representations. This method enables us to identify synonyms and related terms that may not have been included in our original set of keywords.

Specifically, we applied word embedding methods to the speeches of foreign ministry spokespersons (2019–2023). These speeches often contain nuanced and coded language that reflects the state's official stance on various issues, making them a valuable resource for our research. In this way, combining keyword and word-embedding methods allows us to overcome the limitations of a purely keyword-based approach. By identifying and incorporating synonyms and related terms, we can capture a more comprehensive and nuanced picture of bloc building in international relations. We do not use this approach for data collection on the Russian side because "sanction" are pervasively used in media coverage.

Others may question the breadth of our keyword selection, suggesting that these terms might be too broad to precisely locate bloc building–related material. However, we argue that this breadth is both necessary and strategic. The concept of bloc building spans a variety of interconnected political, economic, and cultural activities, and using entity keywords, we can better grasp the diversity of narratives for bloc building. This is different from traditional methods that mainly focus on a single narrative. More importantly, authoritarian states weaponize media coverage for specific political goals, such as expressing their attitude toward specific countries.

	China Side	Russia Side
Overlapping Keywords	"Beijing," "China," "Russia," "Moscow," "BRICS," "Kazakhstan," "Vietnam," "Iran," "Israel," "Turkey," "Brazil," "India," "Argentina," "Hungary," "USA," "Germany," "Great Britain," "Poland," "Italy," "France," "Finland," "Sweden," "Finland," "NATO"	
Synonyms Identified by Word-Embedding Methods	"withdraw," "clique," "opposition," "break chain," "high walls of the courtyard," "confrontation," "camp confrontation," "gang up," "trade war," "cold war"	
Synonyms in Chinese	"退群", "小圈子", "对立", "断链", "小院高墙", "对抗", "阵营对抗", "拉帮结伙", "贸易战", "冷战" "单边主义", "霸权主义", "强权政治", "保护主义", "筑墙设垒", "脱钩断链", "单边制裁", "极限施压", "多边平台政治化"	

A3. STM Model Search_K
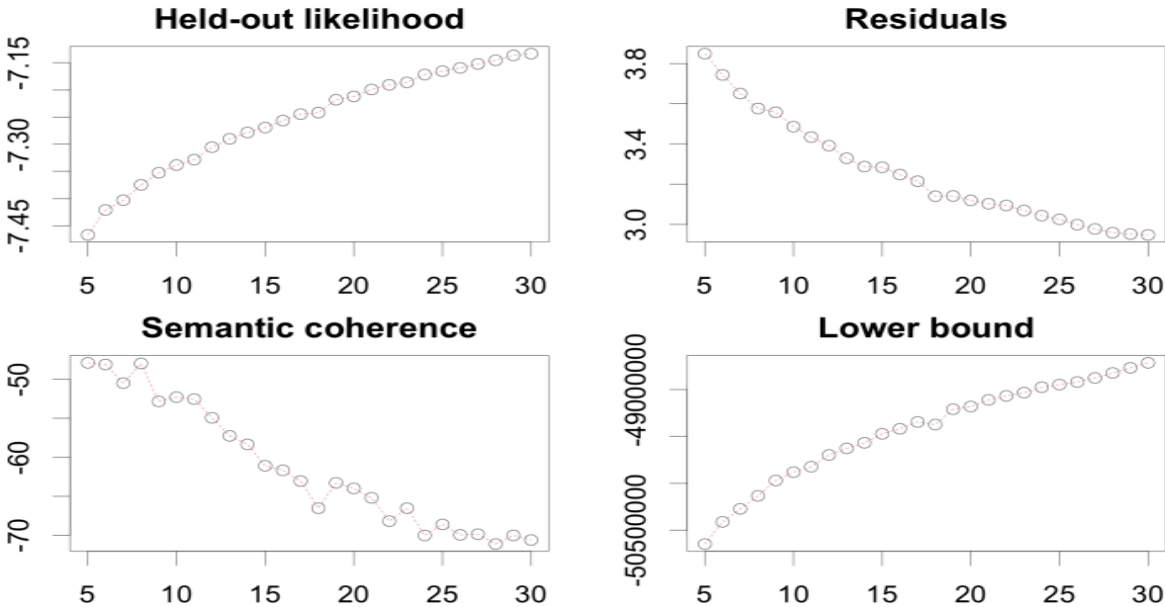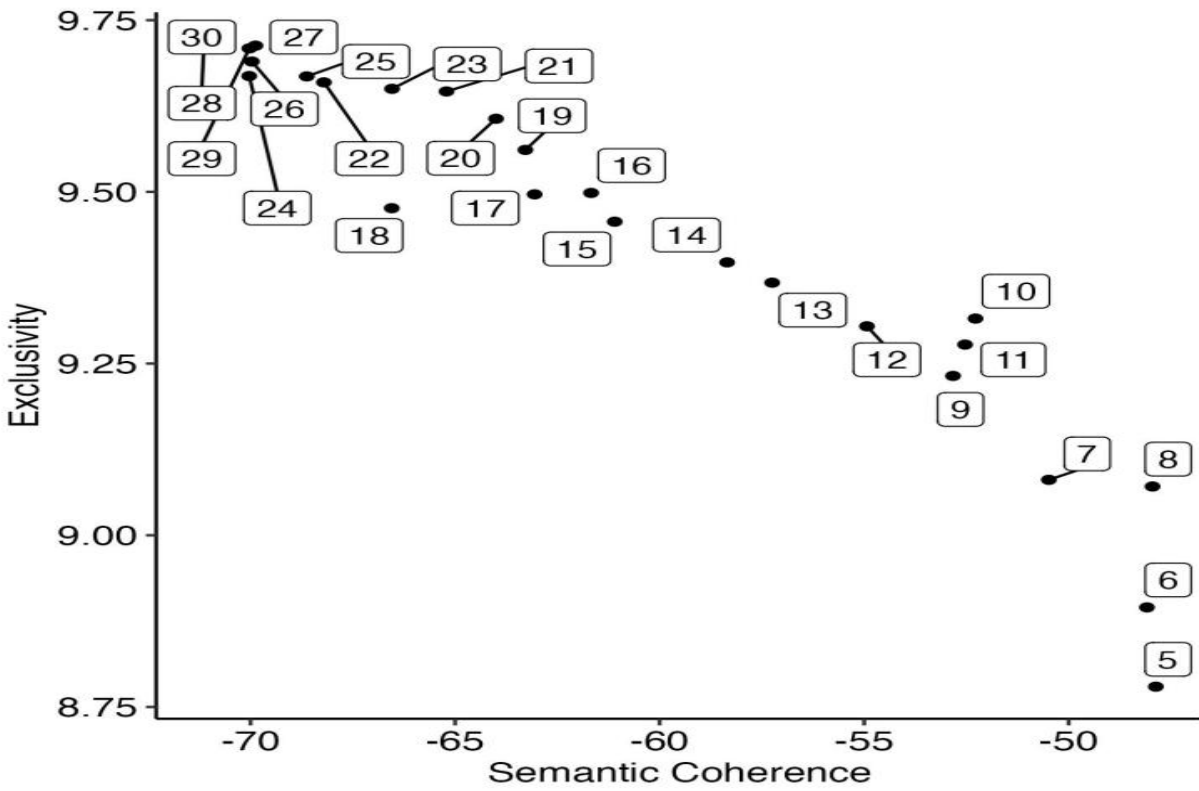
A4. Fine-tuned Model Performance
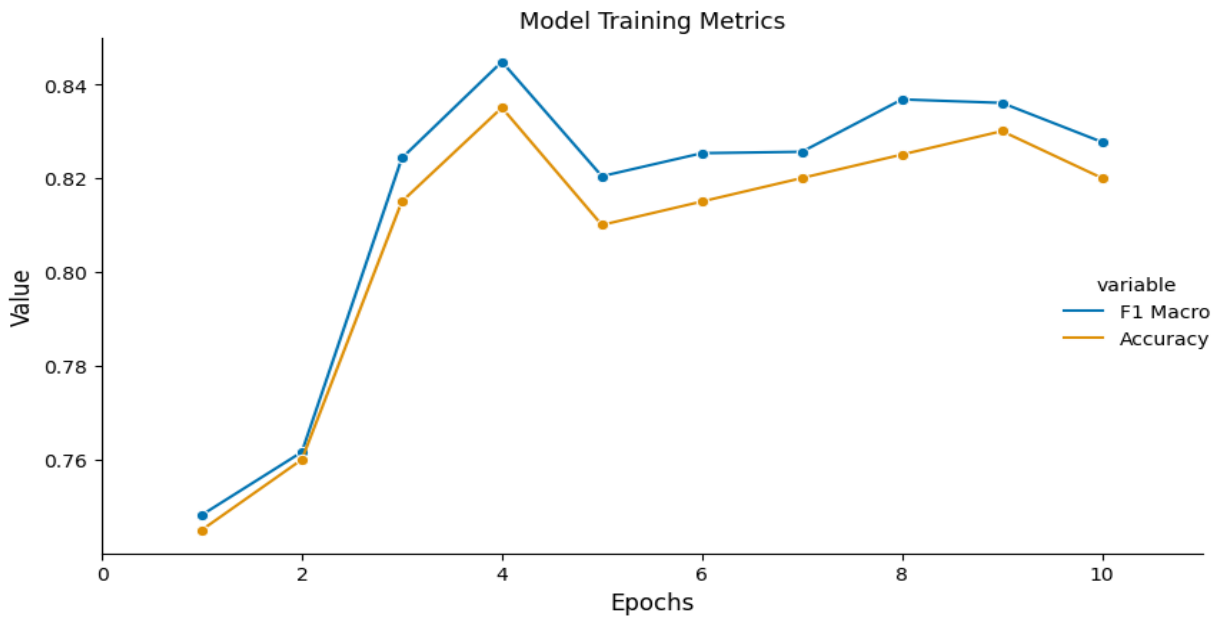
A5. Expected Topic Proportion for Each Side

Expected Topic Proportion Overtime: China

Expected Topic Proportion Overtime: Russia
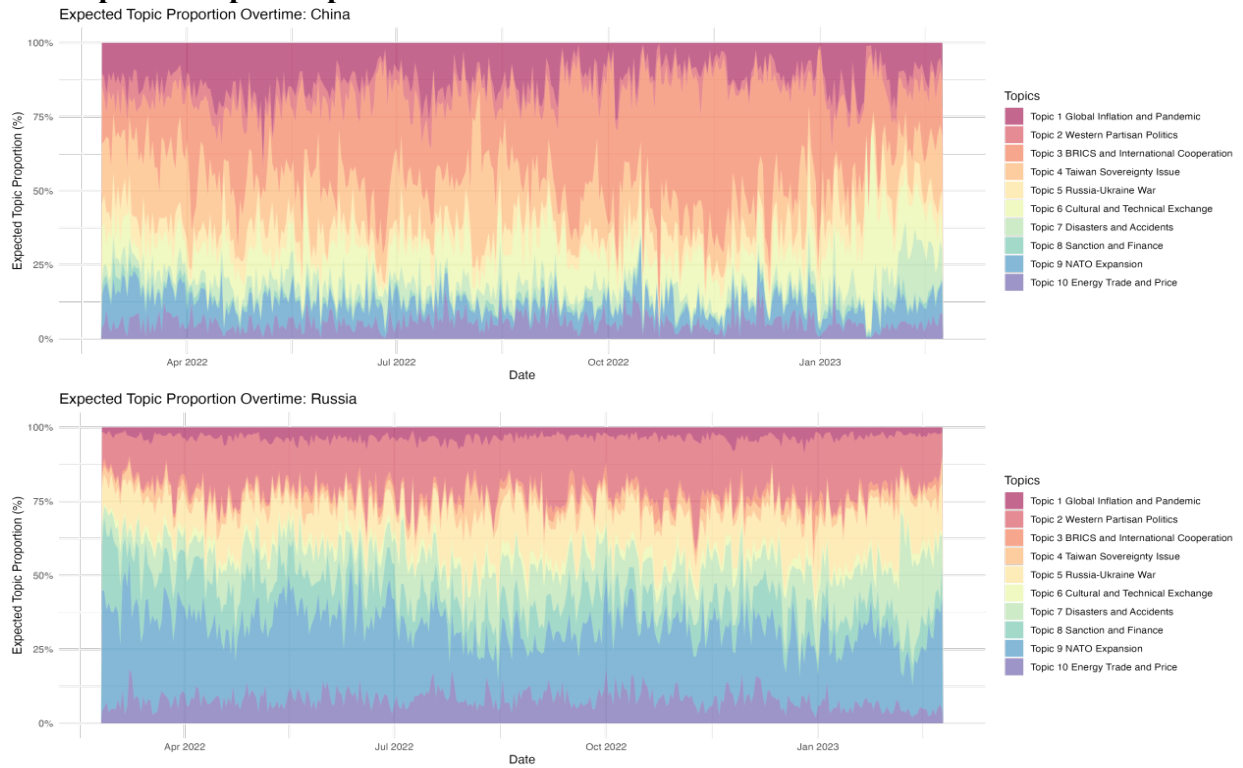
A6. China and Russia's Media Coverage about Each Other
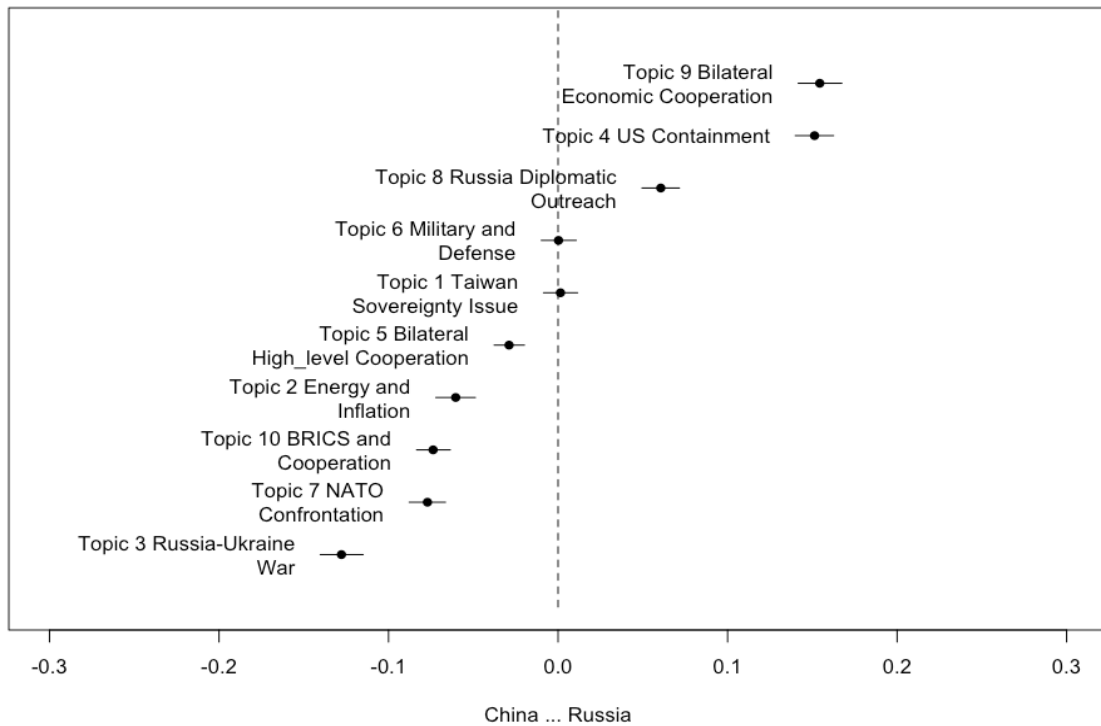
A7. Keywords for Each Topic

Topic 1 Global Inflation and Pandemic	rate, virus, disease, inflation, monetary, prevention, statistic
Topic 2 Western Partisan Politics	republican, election, trump, democrat, truss, johnson, conservative
Topic 3 BRICS and International Cooperation	jinping, brics, communist, cooperation, promote, mankind, promoting
Topic 4 Taiwan Sovereignty Issue	taiwan, wenbin, indopacific, lijian, strait, sinous, japan
Topic 5 Russia–Ukraine War	missile, artillery, army, armored, pentagon, ammunition, rocket
Topic 6 Cultural and Technical Exchange	exhibition, festival, technology, railway, electric, museum, digital
Topic 7 Disasters and Accidents	injured, earthquake, police, killed, victim, prison, incident
Topic 8 Sanctions and Finance	visa, payment, ruble, izvestia, currency, airline, card
Topic 9 NATO Expansion	putin, lavrov, vladimir, sweden, diplomat, nato, peskov
Topic 10 Energy Trade and Price	oil, gas, export, price, barrel, energy, coal

Notes: The seven words with the highest FREX score for each topic were presented. FREX is a measure that balances word frequency and exclusivity to a specific topic. Words with high FREX scores are both relatively frequent in a topic and exclusive to that topic, which makes them suitable descriptors of the topic.

A8. Topic Proportions for Entire Corpus

Topics with their Average Proportions and Top FREX Words
Top 7 FREX terms per topic

Topic		FREX Words
9		putin, lavrov, vladimir, sweden, diplomat, nato, peskov
2		republican, election, trump, democrat, truss, johnson, conservative
5		missile, artillery, army, armored, pentagon, ammunition, rocket
7		injured, earthquake, police, killed, victim, prison, incident
8		visa, payment, ruble, izvestia, currency, airline, card
3		jinping, brics, communist, cooperation, promote, mankind, promoting
10		oil, gas, export, price, barrel, energy, coal
4		taiwan, wenbin, indopacific, lijian, strait, sinous, japan
1		rate, virus, disease, inflation, monetary, prevention, statistic
6		exhibition, festival, technology, railway, electric, museum, digital

Average Proportion