



Russian disinformation in Eastern Europe. Vaccination media frames in ro.sputnik.md

Desinformación rusa en Europa del Este.

Marcos mediáticos de la vacunación en ro.sputnik.md

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ABSTRACT

The news site ro.sputnik.md is the Romanian language version of the Sputnik news website platform, owned by the Russian government, one of the main channels used by the Kremlin to disseminate mis- and disinformation across Russian borders. The current research aims to identify the frames associated with anti-COVID-19 vaccines, and the news values employed in constructing news discourse on vaccination in ro.sputnik.md media texts. To map the media frames and the lexical and discursive constructions, the research proposes a mixed methods content-based approach, where automated text analysis (frequency, co-occurrence, n-grams) is combined with thematic and discourse analysis. Six emphasis frames are identified in the corpus (N=1,165): Superiority of the Russian Sputnik V Vaccine, Fatal/Side Effects of EU Authorized Vaccines, Limitations of Individual Rights and Freedoms, EU and/or Romanian Authorities' Struggle, Children and Teenagers' Protection, and Big Pharma Conspiracy. The findings show that specific discursive patterns are associated with the negative news value: death, side effects (blood clot, thrombosis, coagulation), restrictions, and interdictions or warnings (serious, risk, negative, panic, etc.), while the conflict news value is associated with warfare vocabulary (defense, threat, battle, fire, gunpowder, etc.); and eliteness, with well-known actors (state leaders, European leaders, famous "conspirators") and countries (powerful international actors, meaningful neighbours).

RESUMEN

El sitio de noticias ro.sputnik.md es la versión en lengua rumana de la plataforma web de noticias Sputnik, propiedad del gobierno ruso, uno de los principales canales utilizados por el Kremlin para difundir información errónea y desinformación a través de las fronteras rusas. La presente investigación pretende identificar en los textos mediáticos de ro.sputnik.md los marcos asociados a las vacunas anti-COVID-19 y los valores noticiosos utilizados para construir el discurso informativo sobre la vacunación. Para mapear los marcos mediáticos y las construcciones léxicas y discursivas, la investigación propone un enfoque mixto basado en el contenido, en el que el análisis automatizado del texto (frecuencia, co-ocurrencia, n-gramas) se combina con el análisis temático y del discurso. En el corpus se identifican seis marcos de énfasis (N=1.165): Superioridad de la vacuna rusa Sputnik V, efectos fatales/secundarios de las vacunas autorizadas por la UE, limitaciones de los derechos y libertades individuales, lucha de las autoridades de la ue y/o rumanía, protección de los niños/adolescentes y conspiración de las grandes farmacéuticas. Los resultados muestran que al valor noticioso de negatividad se asocian fórmulas discursivas específicas: muerte, efectos secundarios (coágulos de sangre, trombosis, coagulación), restricciones e interdicciones o advertencias (grave, riesgo, pánico), mientras que al valor noticioso de conflicto se asocian el vocabulario bélico (defensa, batalla, pólvora) y al elitismo, actores conocidos (líderes estatales, «conspiradores» famosos) y países (actores internacionales poderosos, vecinos significativos).

KEYWORDS | PALABRAS CLAVE

Media framing, news values, content analysis, textual analysis, COVID-19 vaccine, Sputnik News.

Marcos mediáticos, valores noticiosos, análisis de contenido, análisis textual, vacuna COVID-19, Sputnik News.



1. Introduction

1.1. Mis- and disinformation and vaccine hesitancy

The primary purpose of Russian disinformation is to undermine the official version of events (MacFarquhar, 2016) and to “pollute” the information environment, thus creating enough doubt to momentarily paralyse decision-makers when evaluating Russia’s actions (White, 2016), which is facilitated by various media channels. The English-language Russian TV network Russia Today (RT) and Sputnik News websites in several different languages are some of the main sources of mis-/disinformation for individual European states (Kragh & Asberg, 2017; Snegovaya, 2015; Cvjeticanin et al., 2019). The terms “disinformation” and “misinformation” are defined in contrast with verifiable information, as part of a three-type taxonomy: disinformation is intentionally disseminated false information, misinformation is promulgated by an entity who erroneously believes the information to be true, while mal-information is true, but publicly communicated with the intent to harm a person/institution/country (Ireton & Posetti, 2018). Recently, while the World Health Organization has been dealing with the COVID-19 pandemic, social media platforms and other media outlets have been hosting an epidemic of misinformation, an “infodemic” that is actively endangering public health (Zarocostas, 2020). Between anti-vaccination campaigns and the widespread reach of disinformation, the vaccination rate for highly infectious diseases has been steadily decreasing (Innes, 2019). In the context of the COVID-19 pandemic, the Russian government might be involved in spreading misinformation on vaccines, even though many anti-vaccination conspiracy theories are generated in the USA (Bărgăoanu, 2021, as cited in Higgins, 2021). The over-abundance of information, which includes online mis-/disinformation, is making it difficult for people to find trustworthy sources to help with decision-making regarding vaccination (Scales et al., 2021). Since “hoaxes about the coronavirus were disseminated mainly on social networks” (Salaverría et al., 2020: 2), social media platforms’ role in the “spread of misinformation and denial of scientific literature” is seen in the rise of vaccine hesitancy (Rosenberg et al., 2020: 418; Kang et al., 2017). Vaccine resistance or hesitancy is defined as the “delay in acceptance or refusal to vaccinate despite the availability of vaccination services” (Nossier, 2021; World Health Organization, 2019). Vaccine resistance is further reinforced through factors such as misinformation and lack of trust in the government or the healthcare system (Scannell et al., 2021). This is especially evident on Twitter (Scannell et al., 2021), a platform where the Russian Vaccine Sputnik V has been attracting the most attention when compared to the discourse on other vaccines (Carrasco-Polaino et al., 2021).

At the beginning of the pandemic, vaccination officials feared that skepticism around vaccination could lead to lower vaccination rates (Our World in Data, 2019). According to the IRES poll on vaccination in Romania (IRES, 2021), 23% of Romanians had a negative opinion on vaccines, based on the belief that they have adverse reactions (37%), on lack of trust or agreement on vaccination (15%), lack of public information and fear of manipulation (11%), and distrust in vaccine safety and efficacy (10%). During the fourth wave of the pandemic, Romania registered one of the lowest vaccination rates in Europe: on September 7th, 2021, Valeriu Gheorghiu, Romanian military doctor and coordinator of the National Anti-COVID-19 Vaccination Campaign, declared that 31% of the eligible population (12+) at a national level was vaccinated with at least one dose. By the start of November 2021, Romania became the number 1 country in the world in terms of COVID-19-related deaths (Higgins, 2021). The cultural heritage of ex-communist Eastern European states also plays a significant role, as deep-seated vaccine hesitancy is fuelled by political instability, conspiracy theories, and mistrust of authorities. In addition, legislation on disinformation cannot keep up with the rapid and ongoing development of new media (Claussen, 2018). Ivan Krastev, a Bulgarian political scientist, told CNN that lack of trust is high amongst both Romanian and Bulgarian citizens, adding that “even the medical community, doctors, nurses, many are hesitant to get vaccinated, so it is not a surprise that the society as a whole is too” (Kottasová, 2021).

Sputnik News and Russia Today’s news reporting is often under scrutiny due to their Russian state ownership: “Of the approximately \$1 billion that the Kremlin allocates annually to the media it controls, about one-third goes to institutions that produce and broadcast news in foreign languages, institutions such as Sputnik and RT” (Voicu, 2018, apud, Shuster, 2015). RT functions as “a tool of foreign policy of the Russian government” due to its dissemination of conspiracy theories and misinformation (Yablokov,

2015: 301), while Sputnik News is instrumental in framing news (Deverell et al., 2021) and constructing strategic narratives to further Russia's public diplomacy efforts (Demjanski, 2020). These media outlets' content is further disseminated through social media platforms such as Twitter, Facebook, and WhatsApp (Müller & Schulz, 2021). The ro.sputnik.md site is the Romanian language version of the Sputnik news platform. Recently, ro.sputnik.md has generated controversies related to its goals: "Sputnik news agency remains one of the main channels used by the Kremlin to conduct disinformation campaigns across Russian borders, affecting the European Union, its Member States, and countries in the shared neighbourhood" (Ștefan, 2020: 113).

In light of the COVID-19 pandemic and vaccine hesitancy, this paper aims to fill the gap in academic knowledge on vaccine-relevant media discourse generated by Sputnik news. The study's purpose is to determine the construction of news media discourse on vaccines and vaccination, by identifying news media frames associated with vaccines, and prominent news values on anti-COVID-19 vaccination deployed in ro.sputnik.md's media texts.

1.2. Theoretical framework: Media frames and news values

Considering the purpose of this research, the study's theoretical framework is based on two different paradigms relevant to media communication: framing and news values. Framing, as a Media Effects research paradigm, is understood as the process of selecting and conveying information based on journalists' framing judgments, which filter into news discourse, and in turn, have some potential to shape or maintain audiences' beliefs and attitudes (Entman & Rojecki, 1993). Frames are defined as the selection of certain facets of reality, which are highlighted in a media text to produce a dominant meaning, through either defining problems, diagnosing causes, making certain moral judgments, and/or suggesting remedies for the reported issue/topic (Entman, 1993). Content analysis of news media frames can be approached via two paths: inductive, meaning an open-view approach to dominant meanings identified in media texts, and deductive, based on predefined variables (Semetko & Valkenburg, 2000).

This dominant-meaning approach to defining frames does not assume that audiences will automatically process media messages in complete dependence on media products' framing, however, as media scholar Robert M. Entman suggests, "if the text frame emphasizes in a variety of mutually reinforcing ways that the glass is half full [...], relatively few in the audience will conclude it is half empty" (Entman, 1993: 56). In communication sciences, the role that frames play in shaping audience attitudes is initially explored under agenda-setting theory, as second-level agenda-setting (McCombs & Shaw, 1972), which is later reconceptualised under framing theory as frame setting (Scheufele, 1999) or framing effects (Druckman, 2001). This research is focused on one such framing effect, an emphasis framing effect, which is concerned with the emphasis type of frames, seen in messages or media objects which focus on specific selected aspects and considerations of an issue, while excluding others, and have the potential to affect decision-making and citizen competence (Druckman, 2001). Research has linked emphasis frames to their effects as observed in different political outcomes (Kaiser, 2020) and certain public attitudes towards specific issues (de-Vreese et al., 2011).

Considering the present study's scope, the analysis of emphasis frames is based on a recent study of audience reception of media messages related to anti-COVID-19 vaccine issues: *The Effect of Frames on COVID-19 Vaccine Resistance* (Palm et al., 2021), the purpose of which was to examine the effects of both pro- and anti-vaccination message frames, which mimic news articles, on the public's attitudes and beliefs regarding vaccine resistance/uptake. The results indicate that attitudes towards vaccines are swayed towards positive (increased likelihood of getting vaccinated) when the public is confronted with frames that focus on either the safety of vaccines or on how others plan to get vaccinated. The results also show that the public's general attitude towards vaccination is a negative one when confronted with frames that hone in on political figures using the vaccine to advance their own agenda, as well as frames focusing on how others are not willing to get vaccinated (Palm et al., 2021).

Academic knowledge and research on news values are rooted in Johan Galtung and Mari Holmboe Ruge's research on *The Structure of Foreign News* (Galtung & Ruge, 1965). The authors identify and therefore create an initial taxonomy of news factors that determine the selection of relevant news,

such as frequency, threshold, meaningfulness, unexpectedness, continuity, personification, composition, references to elite countries/people, etc. (Galtung & Ruge, 1965: 70). Their model is based on the concepts of gatekeeping and news selection, which refer to the journalistic practice of deciding which story is newsworthy. The authors' main preoccupation was "how and why an event becomes news and thus has news value"; therefore, the empirical validity of their research places it in a position of landmark research in journalism studies (Joye et al., 2016: 8-12).

News values are defined as the set of criteria applied by news workers in the process of selecting, systemizing, and communicating stories that are deemed newsworthy (Bednarek & Caple, 2017; Harcup & O'Neill, 2016; Joye et al., 2016; Bednarek & Caple, 2014). Bednarek and Caple argue that a discursive approach, focused on corpus linguistic analysis of news values, can yield more comprehensive results, since "news values are seen as values that exist in and are constructed through discourse" (2014: 135). They identify a set of common news values: timeliness, consonance, superlativeness, negativity, impact, eliteness, etc. Based on their qualitative study of mainstream journalism, Tony Harcup and Deirdre O'Neill also offer a comprehensive taxonomy of news selection factors, such as exclusivity, conflict, shareability, drama, relevance, celebrity, magnitude, etc. (Harcup & O'Neill, 2016: 1482).

The present study focuses on some of the enumerated news values, namely negativity, conflict, meaningfulness, and eliteness. Negativity is seen in "references to negative/positive emotion and attitude", while eliteness infuses news media discourse that is concerned with nationally and internationally recognizable names (Bednarek & Caple, 2017: 79). Meaningfulness is seen in the news on events of cultural proximity or relevance (Galtung & Ruge, 1965), when a "foreign event is relevant to and closely matches cultural and historical values of the home country" (Joye et al., 2016: 9). The concept has been re-interpreted to incorporate the notion of proximity in its widest sense possible, therefore, several other (inter)related factors create meaningfulness, such as economical and "historical links, geographical distance, as well as psychological or emotional distance" (Joye, 2010: 588). Conflict is seen in "stories concerning conflict such as controversies, arguments, splits, strikes, fights, insurrections and warfare" (Harcup & O'Neill, 2016: 1482).

2. Materials and methods

The research questions are centered around exploring and analysing the news content of the Romanian/Moldovan edition of the Sputnik news platform (ro.sputnik.md) and its discourse on vaccination and the anti-COVID-19 vaccines: Which emphasis frames are present in the ro.sputnik.md discourse on anti-COVID-19 vaccines? (RQ1); What frequently co-occurring lexis constructs each of the identified emphasis frames? (RQ1a); How does ro.sputnik.md present the Russian vaccine Sputnik V, in comparison with EU authorised vaccines? (RQ1b); How are the main news values (conflict, negativity, eliteness, meaningfulness) discursively constructed in the ro.sputnik.md content? (RQ2).

To answer these questions, a mixed methods content-based approach is employed, where automated text analysis (frequency, co-occurrence, n-grams) is combined with thematic and discourse analysis. The initial dataset consists of all published articles that contain the term "vaccine", which were collected using a web data extraction software, Octoparse 8. To ensure the validity and reliability of the data collection instrument, the ro.sputnik.md site's search engine was used to identify articles containing the Romanian-language lemma for "vaccine", which donned all articles containing the words "vaccine" and "vaccination". Since the search engine provides a total number of articles found, this number was subsequently checked to match the data sample extracted.

The articles referring to anti-COVID-19 vaccines were kept in the final sample (N=1165), while the articles covering other vaccines (N=41) were eliminated. The period resulting after the initial filtering of the article corpus ranges from January 10th, 2020, to November 1st, 2021. To detect frames associated with vaccination and anti-COVID-19 vaccines, an inductive approach was used: the corpus of 1165 articles was manually coded by one coder; in the first stage, any particular definition of the vaccines, causal interpretation of vaccination, or a moral evaluation of the effects of the COVID-19 pandemic identified in the headlines, were coded as frames. During the second stage, the identified frames were refined into six categories (Table 1).

Table 1. Main corpus and frames

Corpus of analysis	Frame	N	WC	Threshold	Freq.
Ro.sputnik.md: "vaccine"		1,165	463,088		
	(F1) Superiority of the Russian Sputnik V Vaccine	286	92,434	28	60
	(F1a) Large Scale Adoption of the Vaccine	125	32,577	20	30
	(F1b) Efficacy and Safety of the Vaccine	30	12,711	5	15
	(F1c) Obstacles/Discrimination Against the Vaccine	20	9,855	3	8
	(F2) Fatal/Side Effects of EU Authorized Vaccines	105	36,321	10	30
	(F3) Limitations of Individual Rights and Freedoms	84	40,197	10	32
	(F4) EU and/or Romanian Authorities' Struggle	32	14,975	5	15
	(F5) Children and Teenagers' Protection	14	4,897	2	6
	(F6) Big Pharma Conspiracy	9	5,779	2	6

Note. N=number of articles; WC=word count; Threshold=threshold defining the edge between two nodes in a co-occurrence network; Freq.=minimum word frequency threshold.

Next, the data pertaining to the Superiority of the Russian Sputnik V Vaccine frame was further investigated, and manual coding was employed in the process of determining three sub-frames within the Sputnik V sub-corpus, which focus on either the safety/efficacy of the vaccine, on large scale/international adoption of the vaccine, or on international/European obstacles and discrimination against the Russian vaccine.

All 6 frames and the 3 sub-frames (Table 1) were analysed via semantic networks of co-occurrence, which were generated using a text-mining tool, Orange (orangedatamining.com). To help determine patterns of co-occurrence of words/n-grams specific to each frame, each sub-corpora was imported into Orange as a separate project with distinct threshold and frequency settings (Table 1). This was necessary due to each project's different word count, which requires different threshold parameters settings.

A corpus manager and text analysis software, Sketch Engine, was used to quantitatively analyse the main corpus (word count=463.088 words), as well as the relevant sub-corpora (Table 1). To facilitate the analysis of the linguistic construction of prominent news values, lists of keywords and frequent words/lemmas were generated. Based on the most frequent lemmas and keywords, markers for eliteness and meaningfulness were identified, as well as a vocabulary of conflict and negativity. In order to accurately interpret the data, a concordance/text view was employed, which allowed for an examination of the context in which every word/n-gram appears.

3. Results

3.1. Emphasis frames in the ro.sputnik.md discourse on anti-COVID-19 vaccines

The six identified emphasis frames are distributed as follows: in more than half of the coded corpus, a frame on the Superiority of the Sputnik V Vaccine (53.96%) is employed, while 19.81% of articles report on deaths and side effects due to vaccine inoculation, a frame which was named Fatal/Side Effects of EU Authorized Vaccines. There is also some prevalent discourse on Limitations of Individual Rights and Freedoms (15.84%), and discourse indicating that the European and Romanian authorities struggle in managing the health crisis (6.03%). Children and Teenager's Protection (2.64%) and Big Pharma Conspiracy (1.69%) were identified in similar percentages.

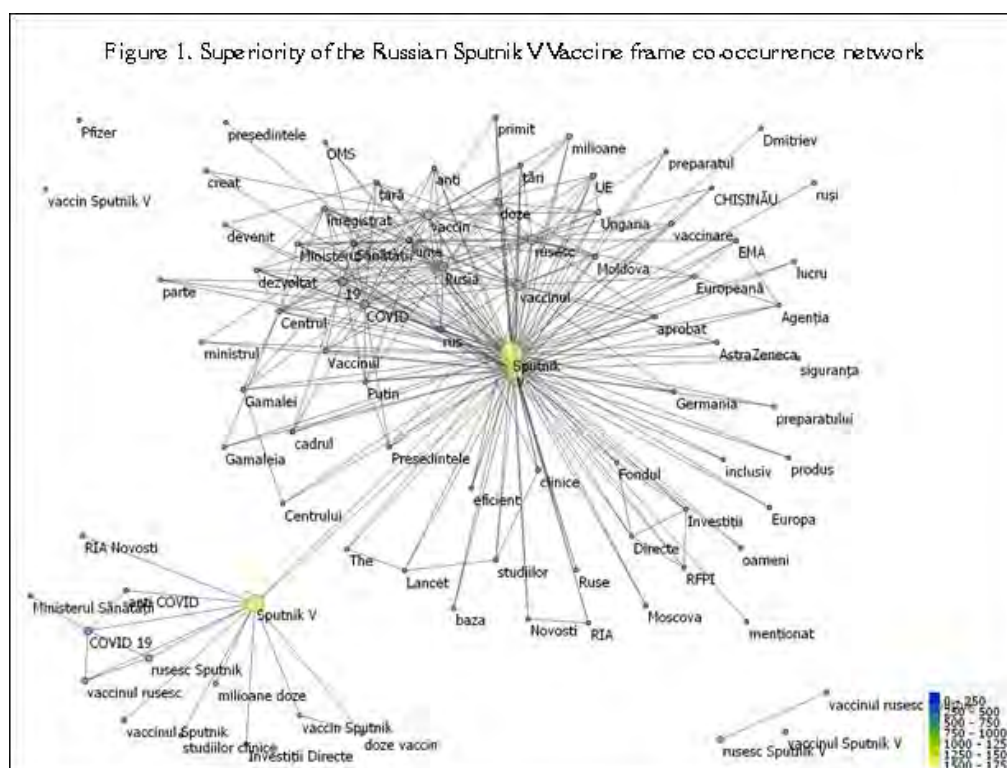
The Superiority of the Sputnik V Vaccine frame encompasses a variety of topics related to the Russian vaccine and constantly emphasizes how this serum is better than EU authorised vaccines (Pfizer, Moderna, AstraZeneca, Johnson & Johnson). The Russian vaccine's advantages are clinically demonstrated: it "can protect against all known variants" (Sputnik, 2021a). The same idea is supported by using statistical evidence: "New data: Sputnik V, 97.6% efficient" (Sputnik, 2021b). In headlines such as "Gamaleya: Sputnik V can protect against all known variants" (Sputnik, 2021a), an appeal to authority is employed (argumentum ab auctoritate), as the Russian Gamaleya Research Institute of Epidemiology and Microbiology is frequently cited by ro.sputnik.md.

The Fatal/Side Effects of EU Authorized Vaccines frame could be identified in headline constructions such as: "Huge scandal: three deceased after Pfizer vaccination!" (Sputnik, 2021c), where the syntagm "huge scandal" functions as a marker for the severity of the situation. There are also allegations that vaccines could cause death, even at an early age (all of them, except Sputnik V): "High-school student deceased after Pfizer vaccine – devastated family, "Sofia was healthy" (Sputnik, 2021d). This frame is constructed through a life-death opposition: "was healthy"/"deceased after vaccine".

The Limitations of Individual Rights and Freedoms frame is identified as a form of moral evaluation of the pandemic's effects: "A Romanian MEP compares mandatory vaccination with nazism" (Sputnik, 2021e). Negative words such as "nazism" and "mandatory" are used to emphasize potential human rights violations. Following the same idea, another headline reads "Cristian Terheș attacks European Parliament's "democracy" harshly – Video" (Sputnik, 2021f), where Terheș, a Romanian Member of the European Parliament (MEP), criticizes the democratic principles of the EU. Another headline references a Romanian lawyer's statement on freedom, using a metaphor: "Chitic: Our freedom's winter began" (Sputnik, 2021g).

3.2. Emphasis frames: Frequently co-occurring lexis

Co-occurrence networks or semantic networks are frequently used as a text analysis method that enables the visualization of potential relationships between people, organizations, concepts, etc. The Superiority of the Russian Sputnik V Vaccine frame's co-occurrence analysis reveals patterns of intersections between syntagms and words, all centered around the "Sputnik V" vaccine (Figure 1).



Main co-occurrences are found in names of countries: Germany, Hungary, Republic of Moldova, institutions, and organisations such as the "Health Ministry", RDIF (The Russian Direct Investment Fund), the "Russian Gamaleya Research Institute of Epidemiology and Microbiology", the European Commission, WHO. Frequently co-occurring names are (Vladimir/President) Putin (president of Russia) and (Kirill) Dmitriev (Russian Direct Investments CEO), and names of media outlets/journals such as Novosti (Serbian media company), and The Lancet (medical journal). N-grams such as "million doses", "the Russian vaccine", "safety and efficacy", and "clinical trials" are also centered around the Sputnik V Vaccine.

The Fatal/Side Effects of EU Authorized Vaccines frame corpus analysis (Figure 2) highlights the main issues surrounding discourse on side effects of EU-authorized vaccines and their severity: frequently co-occurring nouns/n-grams such as "side effects", "deaths", "thrombosis", "blood clots", "serious", "reactions", together with the main actors: "anti-COVID-19 vaccine", "AstraZeneca", "Pfizer BioNTech", "Moderna", "Johnson Johnson", and countries/institutions such as "USA", "Romania", the "EU", "Health Agency", are connected by words like "cause", "cases", "vaccinated", "administrated", "age", and "died".

Figure 2. Fatal/Side Effects of EU Authorized Vaccines frame co-occurrence network

Figure 3. EU and/or Romanian Authorities Struggle frame co-occurrence network

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as “risk”, “immunity”, “disease”, “cases”, and “Pfizer BioNTech”, “Moderna”, “Romania”. This cause-effect relationship presents children as being at risk if vaccinated. Names of authorities such as The Romanian Ministry of Public Health and the Ministry of National Education are also frequent in the corpus.

The Limitation of Individual Rights and Freedoms frame is constructed through the frequent co-occurrence of words/n-grams such as “COVID-19”, “vaccine”, “people”, the “public”, “mandatory”, “obligatory”, “freedom”, “rights”, “mandatory vaccination” and news actors such as Klaus Iohannis (Romanian president) and Cristian Terheş (Romanian controversial political figure, member of the EP). Terheş’s constant attacks towards Brussels are frequently cited by ro.sputnik.md: “EU has become a concentration camp”; “mandatory vaccination is Nazism”; “Brussels will take the fundamental right to life from Europeans”; “in the EU, cockroaches have more rights than humans”. The Big Pharma Conspiracy frame is less frequent in the corpus, but follows the respective conspiracy theory’s narrative; co-occurrence patterns of words/n-grams which reference vaccines: “Moderna”, “Pfizer BioNTech”, “vaccine”, “dose”, are connected through n-grams like “mandatory vaccination”, “Big Pharma”, “law”, “billions of euros” to the relevant news actors: “Iasi University of Medicine and Pharmacy”, “students”, France, the European Commission, Diana Şoşoac (Romanian Senator of the Alliance for the Union of Romanians, a right-wing populist, and nationalist political party), Vasile Astreţ (prominent Romanian medical figure who spread proven disinformation on the epidemiological situation and the disease’s severity).

3.3. The Superiority of the Russian Sputnik V Vaccine sub-frames

The analysis of the Large-Scale Adoption of the Vaccine sub-frame corpus (Figure 4: <https://doi.org/10.6084/m9.figshare.19328975>) shows co-occurrences of names of countries and cities: Russia, Hungary, Republic of Moldova, Germany, Slovakia, Serbia, Argentina, Moscow, Brussels, and institutions: European Medicines Agency, the Russian Direct Investment Fund, the Health Ministry. Other co-occurrences surrounding the Sputnik V Vaccine are “a million doses”, “the Russian Sputnik V Vaccine”, “vaccinated”, “received”, “approved”, “registered”, “used”. The Efficacy and Safety of the Vaccine sub-corpus are constructed through frequently co-occurring words such as “safety”, “efficacy”, “safe”, “good”, “registered”, “product”, “clinical trials”, the Russian Gamaleya Research Institute of Epidemiology and Microbiology, The Lancet (medical journal), all centered around the “Russian Sputnik V Vaccine”. This sub-frame, emphasizing the Efficacy and Safety of the Sputnik V Vaccine is constructed in antithesis with the Fatal/Side Effects of EU Authorized Vaccines frame.

As for Obstacles/Discrimination against the Vaccine, several keywords stand out: countries and cities (Russia, Hungary, Republic of Moldova, the US, Brussels, Moscow, and the EU), and news actors such as Klaus Iohannis, Vladimir Putin, all centred around the “Sputnik V vaccine”. Other frequently co-occurring words and syntagms are “human adenovirus”, “clinical trials”, “question”, “messenger RNA”, “politics”, “president”, “safety”, and “level”. The rhetoric of the three Sputnik V sub-frames conveys a positive representation of the Russian vaccine, which, although efficient, safe, and adopted, used and produced on a large scale, still encounters strong opposition and discrimination from the EU authorities.

3.4. News values

Journalists employ certain news values to select and present events as news stories. Therefore, news values are embedded in and constructed through discourse. The analysis of frequently occurring words/n-grams in the corpus (463.088 words) revealed that news media discourse on vaccines and vaccination generated by the md.sputnik.ro news website is discursively structured via four prominent news values: conflict, negativity, eliteness, and meaningfulness. The sampled articles’ texts are constructed, on the one hand, through lexis that is specific to the topic of anti-COVID-19 vaccination and, on the other hand, through highly generic formulas.

3.4.1. Conflict

Conflict is a pre-eminent news value, constructed through several frequently-occurring terms (frequency threshold=10; Figure 5: <https://doi.org/10.6084/m9.figshare.19328702>), especially war-relevant lexicon: “gunpowder”, “threat”, “defense”, “battle”, “fire”, “rebellious”. Warfare vocabulary appears in headlines such as: “Analyst: Whatever is going on in Romania, in Europe, and in the world

smells like gunpowder” (Sputnik, 2021o). Highly prevalent words such as “defense” are seen in headlines like: “Russia is not pursuing money. Sputnik V is starting to be defended in Europe” (Sputnik, 2021m); “strategic”: “George Soros breaks the silence: a fulminating interview – interests, and strategies behind the Pandemic” (Sputnik, 2020c); and “threat”: “Hungary puts NATO in its place: it does not see Russia as a threat” (Sputnik, 2021p).

Another conflict-relevant lexis connotes discord, for instance “response”: “The Kremlin has responded to The Sun’s accusations of theft of the AstraZeneca vaccine formula” (Sputnik, 2021l); “tackling”: “Experts from India: Sputnik V, effective in tackling Delta strain” (Sputnik, 2021n). The word “ironic” is used to suggest dissent, as seen in headlines such as: “Orban and Arafat, trampled by a FAMOUS businessperson! Ponta, ironic reaction” (Sputnik, 2020b).

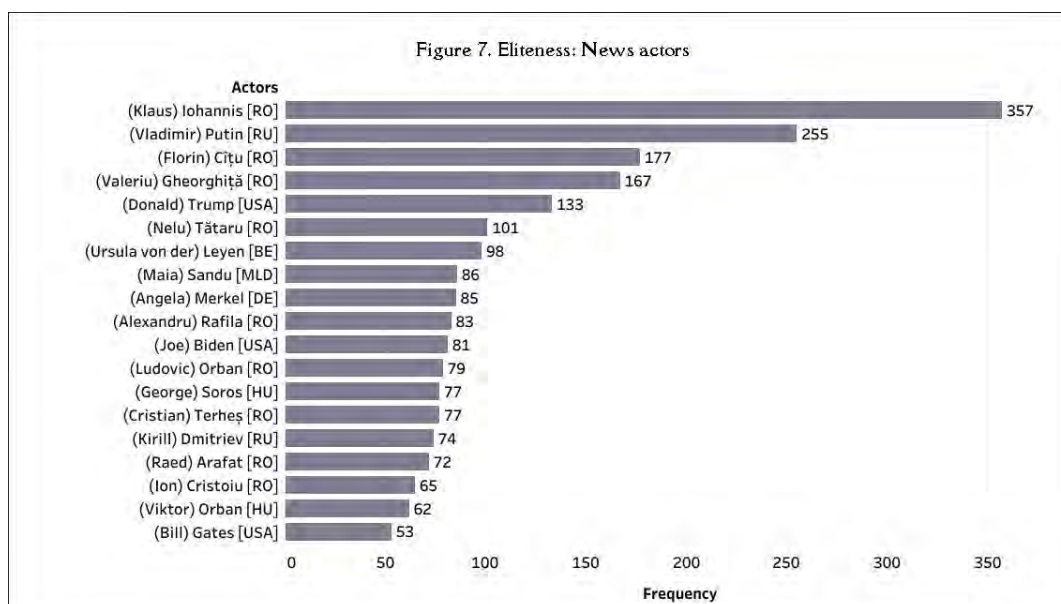
3.4.2. Negativity

The analysis of the relevant negative lexis is firstly based on the association with the COVID-19 virus/infections/disease (frequency threshold=10; Figure 6: <https://doi.org/10.6084/m9.figshare.19328729>). The negative news value is construed through words/n-grams which refer to death: “death”, “death rate”, “fatal”; disease: “infection”, “disease”, “oncologic”; side effects: “adverse”, “blood clot”, “thrombosis”, “coagulation”; restrictions and interdictions: “suspend”, “sanction”, “infringe”, “interdict”; or warnings: “risk”, “negative”, “concern”, “shocking”, “prevent”, “panic”.

The most frequent words constructing negativity are “infection”: “Norway is demanding the purchase of the Sputnik V vaccine amid a record number of infections” (Sputnik, 2021h), “Mirel Curea’s strange infection scandal. Dr. Răzvan Constantinescu’s harsh reaction” (Sputnik, 2021i); “risk”, seen in headlines in which an authority’s opinion is used as evidence to intensify distrust: “A virologist explains the risks of a vaccine created too quickly” (Sputnik, 2020a) or “Doctors, warning about a decision of the Ministry of Health: increases the risk of death” (Sputnik 2021j). The word “death” is the third most frequent negative word and is employed in the news of deaths caused by EU-approved vaccines: “Indonesia suspends a batch of AstraZeneca doses after the death of a vaccine victim” (Sputnik, 2021k).

3.4.3. Eliteness

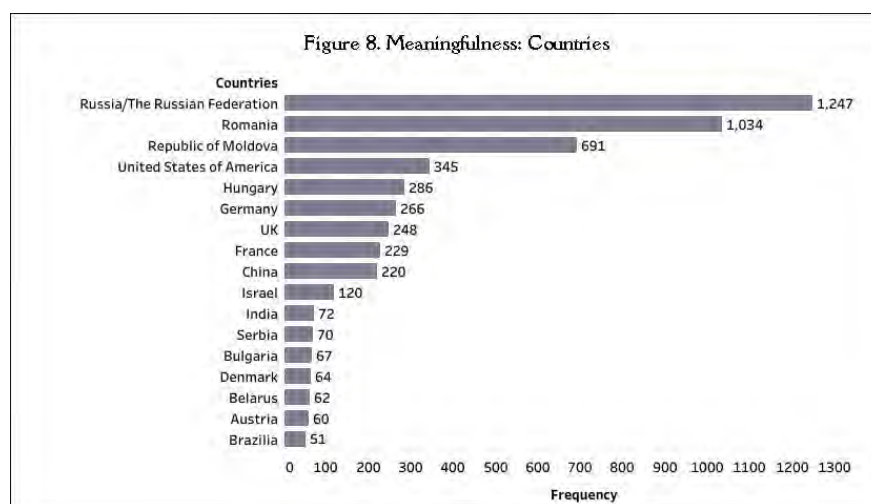
Eliteness is seen in news discourse on celebrities and nationally/internationally recognisable names, in this case, politicians and medical figures. The most frequent words of news actors were singled out (frequency threshold=50, Figure 7).



Three categories of elite personalities were identified: national/regional leaders, medical figures, and famous conspirators. Names of political leaders are predominant in the corpus: Romanian president and prominent public communicator during the first COVID-19 lockdown (Klaus) Iohannis, Russian president (Vladimir) Putin, (former) Romanian Prime minister (Florin) Cîu, (former) US president (Donald) Trump, President of the European Commission (Ursula) von der Leyen and others (Figure 7). Furthermore, names of medical figures are prevalent: Romanian military doctor and the coordinator of the National Anti-COVID-19 Vaccination Campaign (Valeriu) Gheorghiu, the Ministry of Health (Nelu) Tătaru and the Romanian representative in the WHO steering committee, Medical Doctor (Alexandru) Rafila. In October 2020, Rafila rejoined the Social Democratic Party (PSD) and won a seat in the Romanian Parliament during the 2020 elections, becoming PSD's proposal for the Prime Minister position. In November 2021, he was appointed Health Minister. Key figures in the widely circulated conspiracy theories related to the coronavirus pandemic are also present in ro.sputnik.md content: George Soros, Bill Gates.

3.4.4. Meaningfulness

Several (inter)related factors construct the news value of meaningfulness (economical or historical links, geographical distance, psychological or emotional distance). The most frequent country name is Russia/The Russian Federation, followed by Romania, The Republic of Moldova, USA, Hungary, Germany, and the UK (Figure 8).



The frequent occurrence of Romania's neighbouring countries (Hungary, Bulgaria, Serbia, Republic of Moldova) illustrate the value of meaningfulness. Emotionally relevant references are linked to the COVID-19 situation in the UK, a country that hosts around 350.000 Romanian-born residents.

4. Discussion and conclusions

The mixed-methods analysis of vaccine-related ro.sputnik.md content reveals several textual and discursive mechanisms of meaning construction. Identified emphasis frames propose a particular definition of the Russian vaccine, giving prominence to its superiority by focusing on specific selected aspects and considerations of the vaccine's reliability, with the prevalent focal point seen in rhetoric and lexis that anchors on its safety and efficacy, its worldwide spread adoption, and on how others (public figures) plan to or are, vaccinated with Sputnik V. The Russian vaccine's reliability is doubled by constant reporting on the Adoption of the Vaccine by certain countries, an underlying discourse on Russian geopolitical influence beyond its borders to Latin America (Argentina, Venezuela, Mexico), Middle East (Syria, Libya, Palestine, Jordan), Europe (Hungary, Slovakia, Serbia), but also to former Soviet republics (Belarus, Republic of Moldova, Kazakhstan, Turkmenistan). Therefore, data analysis reveals how the vaccine was used by the Kremlin as a geopolitical instrument. Furthermore, the Superiority of the Sputnik V Vaccine emphasis

frame builds a wider frame on Russian institutions and the state's power in effectively dealing with major challenges such as the COVID-19 pandemic: this representation of Russia's capacity to respond to the sanitary crisis is indirectly reinforced by antagonist discourse pertaining to our study's identified frame on European and Romanian Authorities and their struggle in managing the health crisis. The adverse narratives identified by similar research on Sputnik content (Deverell et al., 2021) emerge here too, within discourse constructed to discredit the effectiveness of EU-approved vaccines, thus emphasizing the failures of the European Union and of government institutions involved in the decision-making process.

Moreover, the ubiquitous frame on Fatal and Side Effects of Vaccines that were approved by the European Medicines Agency and adopted by most EU member countries builds on a discourse of distrust and fear. Recent results on the effect of frames on COVID-19 vaccine resistance confirm that the negative frames focusing on how others are not willing to get vaccinated (Palm et al., 2021), encourage vaccine-hesitancy and vaccine-resistance in the public's general attitude. In the same vein, the framing of restrictions in terms of (severe) Limitations of Individual Rights and Freedoms brings forward civil disobedience and social unrest as public agenda issues. The lexical and discursive construction approach proposed by Bednarek and Caple (2014) for the analysis of news values, generated relevant results in the case of four prominent news values (conflict, negativity, eliteness, meaningfulness) targeted by the present study. On the one hand, peculiarities determined by the specificity of the topic –COVID-19 vaccination– are identified: death, side effects (blood clot, thrombosis, coagulation), restrictions, and interdictions or warnings (serious, risk, negative, concern, panic, etc.). On the other hand, the analysis reveals highly formulaic journalistic constructions: the use of warfare vocabulary in the case of the conflict news value (defense, threat, battle, fire, rebellious, gunpowder etc.); the focalisation of the message on well-known actors (state leaders, European leaders, famous “conspirators”) and countries (powerful international actors, meaningful neighbours).

Overall, the methods and tools that were employed provided an accurate mapping of the relevant emphasis frames and the lexical and discursive constructions of the ro.sputnik.md site's content on anti-COVID-19 vaccines and vaccination. Similar strategies of using mixed methods approaches could be used to assess textual media representations and media frames associated with the coverage of issues that have the potential to create public controversies. The research is limited by its data sample, extracted from ro.sputnik.md. A comparison with Sputnik News media outlet's content in other languages could yield more comprehensive results.

Authors' Contribution

Idea, A.A.M.; Literature review (state of the art), T.E.G, T.F.S., A.A.M.; Methodology, A.A.M., T.E.G.; Data analysis, T.E.G, T.F.S., A.A.M.; Results, T.E.G, T.F.S., A.A.M.; Discussion and conclusions, A.A.M., T.E.G.; Writing (original draft), T.E.G, T.F.S., A.A.M.; Final revisions, T.E.G, T.F.S., A.A.M.; Project design and funding agency, T.E.G, T.F.S., A.A.M.

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