CONTENT ANALYSIS OF COVID-19 RELATED DISINFORMATION ON FACEBOOK: TOPICS, SOURCES AND DISCOURSES

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REPORT

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PUBLIC TRUST, COVID-19 AND DISINFORMATION IN CROATIA

In January 2020, the World Health Organization (WHO) declared a Public Health Emergency of International Concern (PHEIC) following the outbreak of the coronavirus (COVID-19). The world has found itself in an unprecedented crisis. The first case of the coronavirus infection in Croatia was registered in February 2020. Rapid reaction of Croatian institutions and the favourable media coverage of the people in charge of managing the crisis, gathered in The Civil Protection Headquarters of the Republic of Croatia, led to a surprising jump in public trust in the early days of the pandemic. This came as a surprise given that the trust in institutions in Croatia is generally amongst the lowest in the EU (Henjak, 2017). According to the Eurobarometer (winter 2021-2022), only 21% of respondents in Croatia tend to trust the Government while 22% tend to trust the Parliament. In comparison, the average trust in national governments and parliaments in the EU is 35% and 36% respectively.

In February 2020, just before the outbreak of the COVID-19 pandemic, 70% respondents included in a regular monthly IPSOS survey believed that Croatia was heading in the wrong direction.[1] However, the handling of the pandemic in Croatia throughout February, March and April 2020 was generally perceived as "timely, adequate, and successful, while the actions of the Headquarters were hardly challenged or disputed" (Grbeša, 2020: 63). In April 2020, IPSOS registered a surprising surge in public optimism: 51% of respondents thought the country was going in the right direction.[2] According to Grbeša (2020) this was likely due to a confidence the citizens felt about how the crisis was being handled. In the same month, Minister of Health, Vili Beroš emerged as the most popular politician in the country for 29.2% of respondents compared to only 2% in March 2020, which is the biggest surge in personal rating in the history of CRO Demoscop, a regular political monthly survey.[3]

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1   Dnevnik.hr (25 March 2020), Imaju li Vlada i predsjednik podršku građana u borbi protiv koronavirusa. https://dnevnik. hr/vijesti/koronavirus/crobarometar-imaju-li-vlada-i-predsjednik-podrsku-gradjana-u-borbi-protiv-koronavirusa---599087. html.

2   Dnevnik.hr (24 April 2020), HDZ povećao prednost pred SDP-om, popularnost raste i Plenkoviću i Milanoviću. https://dnevnik.hr/vijesti/hrvatska/crobarometar-popularnost-stranaka-i-politicara-u-vrijeme-korona-krize---602923.html.

3   Maretić Žonja, Petra (5 April 2020) Nakon tri mjeseca HDZ ponovno prvi izbor građana, a Beroš najpozitivniji političar. *Večernji list*. https://www.vecernji.hr/vijesti/ neocekivana-promjena-u-jeku-krize-politicari-ce-morati-opravdati-velika-ocekivanja-1392018.

However, as soon as it was perceived that decisions of the Headquarters may be driven by politics rather than expert judgments, the public image of the key communicators started to deteriorate. The public mood shifted back to pessimism, with 61% of respondents thinking that the country was going in the wrong direction in May 2020 and 70% in June 2020.[4] Personal rating of the Minister Vili Beroš also sharply declined — he emerged as the most positive politician for 15.4% of respondents in May and 8.1% in June 2020.[5]

It is plausible to assume that the context of institutional distrust has led certain groups of citizens to be distrustful about the dominant, official narrative and policies related to the COVID-19 pandemic, especially during the later stages of the pandemic. This opens the way for the spread of disinformation, misinformation and "alternative" narratives. Several data and studies strongly support this assumption.

First, the vaccination rate in Croatia is among the lowest in the European Union. In August 2022, according to the official data, 68.83% of the population was fully vaccinated. In comparison, in Ireland, France, Denmark or Germany, this number exceeds 90%. According to the Eurobarometer survey from winter 2021-2022, 17% of respondents from Croatia said that they never want to get vaccinated against COVID-19, which is one of the highest percentages in the EU. The European Union average is only 8%.

Second, trust in healthcare workers in Croatia has decreased during the pandemic. According to Eurobarometer surveys from spring 2021 and winter 2021-2022, 66% of Croatian respondents trust health professionals, while 32% do not trust them, which is a drop of several percent compared to earlier measurements. Average trust in healthcare workers at the level of the entire EU is around 80%.

Third, some research suggests that a certain percentage of citizens in Croatia is prone to conspiratorial thinking (see for instance Tonković et al., 2021). For example, the Special Eurobarometer 516: European Citizens'

4   Dnevnik.hr (25 May 2020): Crobarometar otkriva odnos snaga mjesec dana prije izbora. HDZ ispred Restart koalicije, Škoro treći. https://dnevnik.hr/vijesti/parlamentarni-izbori-2020/crobarometar-za-svibanj-hdz-na-vrhu-ali-im-je-restart-za-petama-606754.html.
Dnevnik.hr (26 June 2020) Hrvatska u završnici izbora. https://dnevnik.hr/vijesti/parlamentarni-izbori-2020/hrvatska-u-zavrsnici-izbora-hdz-birajustariji-muskarci-a-restart-koaliciji-sklonije-zene---610790.html.

5   Gregoret, Damira (7 June 2020), Novi CRO Demoskop: Preokret na vrhu, Restart u prednosti pred HDZ-om! Milanović najnegativniji. *RTL.* https://www.rtl.hr/vijesti-hr/novosti/hrvatska/parlamentarni-izbori-2020/3829890/najnoviji-cro-demoskop-preokret-na-vrhu-restart-koalicija-u-prednosti-nad-hdz-om-milanovic-najnegativniji

Knowledge and Attitudes about Science and Technology from September 2021 suggests that 50% of Croatian citizens believe that viruses are produced in government laboratories in order to control our freedom (see Chart 1)
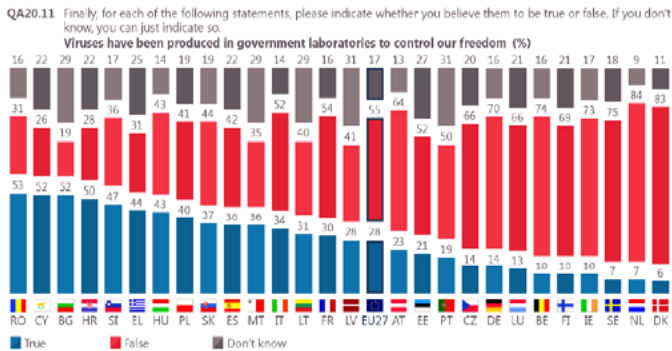

Chart 1: Agreement with the claim that viruses have been produced in government laboratories. Source: Special Eurobarometer 516, September 2021

Fourth, trust in mainstream media in Croatia is among the lowest in the European Union. According to Eurobarometer (spring 2021), only 28% of Croatian respondents said that they trusted the media, compared to 41% at the level of the entire European Union. Although Croatian citizens trust traditional media (television, radio and print) more than they trust social networks, trust in traditional media in Croatia is below the EU average while trust in social networks is above the EU average (see Table 1).

%	2019		2021–2022	
	Croatia	EU	Croatia	EU
Radio	50	57	46	56
Television	47	49	43	49
Print	39	46	36	49
Social networks	32	20	27	20

Table 1: Trust in media. Source: Standard Eurobarometer 92, autumn 2019 / Standard Eurobarometer 96, winter 2021-2022)

Finally, in 2019 73% of Eurobarometer's respondents from Croatia believed that they often encounter 'news' that distort or falsely portray reality. In winter 2021-2022 (Eurobarometer 96, 2021-2022) this percentage was 80%.

Distrust in official sources of information and traditional institutions expressed by Croatian citizens during COVID-19 pandemics, coupled with the impression that disinformation is vastly present in Croatian public spaces, suggests that Croatia needs to invest serious resource into building institutional trust and strengthening resilience against disinformation.

GOAL AND RESEARCH DESIGN

The main goal of this study was to analyse the content of the COVID-19 related disinformation on Facebook in Croatia. Specifically, the goal was to establish how disinformation is constructed and what are its main components and points of appeal. We used qualitative and quantitative content analysis to identify prevailing topics, agents and sources of disinformation and to examine narratives, propaganda techniques and discourses in the posts retrieved from the pages that were immersed in the disinformation universe. We also conducted basic content analysis of the Facebook pages entangled in the disinformation universe to gain the idea about the profile and the logic of the pages that engage with COVID-19 related disinformation debunked by the Croatian fact-checker Faktograf6.

CONTENT ANALYSIS OF THE FACEBOOK PAGES

Using SNA (Social Network Analysis) and VNA (Visual Network Analysis), we captured 1528 sources that engaged with the content debunked by a Croatian fact-checking organization Faktograf (see Brautović, 2022).7 We

6   Faktograf.hr is the only Croatian media outlet specialized in fact checking. Faktograf is a member of the International Fact Checking Network (IFCN), an international network of organizations dedicated to fact checking. Faktograf was launched in 2015 as a joint project of the Croatian Journalists' Association and an NGO organization GONG. In 2018, GONG became an independent publisher of Faktograf. In November 2021, Faktograf became an independent organization. Since April 2019, Faktograf it has been part of Facebook's Third Party Fact Checking program.

7   According to Oliveira and Gama (2012: 99) "a social network is constructed from relational data and can be defined as a set of social entities, such as people, groups, and organizations, with some pattern of relationships or interactions between them. These networks are usually modelled by graphs, where vertices represent the social entities and edges represent the ties established between them. The underlying structure of such networks is the object of study of SNA". In brief, SNA methods and techniques are aimed at discovering "patterns of interaction between social actors in social networks" whereas "the focus of SNA is on the relationships established between social entities rather in the social entities themselves" (Oliveira & Gama, 2012: 99).
On the other hand, as Decuypere (2020: 74) suggests Visual Network Analysis

eliminated 625 Facebook pages that were in languages other than those spoken in the former Yugoslav countries (i.e., pages that were in English, Romanian, Bulgarian, Russian, Ukrainian, or similar). We also excluded 82 internet sources that were not Facebook pages, such as news sites, fact-checking sites, institutional web sites or similar, and 44 sources that were not available anymore (e.g., the pages were shut down). The research corpus generated by SNA thus included 779 Facebook pages mainly in Croatian, Serbian, Slovenian, Montenegrin, Macedonian and Bosnian language. These pages were then classified according to two criteria: 1) 'the super-spreaders' — pages/groups/profiles that shared others' content the most, and 2) 'the most influential' — the pages/groups/profiles whose content was shared the most. According to Brautović (2022) the 'influencers' are mainly devoted to creating content while the super-spreaders are devoted to sharing links of alternative media, mainstream media and individuals. The super-spreaders' communication is mainly one-directional and primarily aimed at reinforcing certain narratives and discourses.

Coding sheet consisted of 10 categories. The pages were first coded for the type of the page (profile, public or private group, community, or business page). SNA and VNA analyses have already established that pages entangled in the disinformation universe that affects Croatian digital and consequently, public space have different geographical origin (Brautović, 2022). Therefore, we coded the pages for their country of origin. We then attempted to profile the page more closely by examining its purpose, i.e., if it is a fan page established to support a person (e.g., a politician, a doctor or similar), a page 'specialized' for COVID-19, or some other topic, a political page, satirical page, 'news' page, activists' page or a page dedicated to 'transcendental and/or religious' topics. Although certain categories may overlap, such as 'political' and 'activist' page, a pilot analysis indicated that there is a difference between the pages that are mainly devoted to politics (e.g., Vučić te laže ne veruj šta ti kaže / Vučić is lying don't believe what he is saying) and the pages that go beyond political issues (e.g., Borba Protiv Okupacije / Fight against occupation).

The pages were then coded for the presence of common conspiracy theses, such as anti-vaccine topics in general, digital control, conspiracy theories about migrants, glorification of Vladimir Putin and his crusade aga-

inst the West, strong anti-American sentiment etc. Finally, we investigated the presence of certain discourses. We coded pages for presence of the populist sentiment (indicated by promotion of conflict between the people and elites and possibly, by presence of the "dangerous others", such as migrants, European Union etc.), presence of national(ist) cues and religious cues. The unit of analysis was one Facebook page. The agreement between two coders ranged from Cohen's kappa = .65 to 1. The complete Codebook is available in the Appendix A.

FACEBOOK POSTS

The content analysis of Facebook posts was conducted on three sets of data. The initial data set included disinformation that were debunked by the Croatian fact-checker Faktograf. It contained 276 Facebook posts pertaining to COVID-19. The other two sets were created from a research corpus generated by SNA that included 779 Facebook pages. These pages were then classified according to two criteria: 1) 'the super-spreaders' — pages that shared content the most intensively and 2) 'the most influential' — the pages that produced content that was shared the most. From each of these two sets we automatically generated 300 posts with the biggest engagement, measured by the number of *shares*. Our decision to use *share* as a measure of engagement is based on a notion that *sharing* involves different types of behaviour and a greater level of engagement than *liking* and *commenting.* All three actions — *share*, *like and comment* — belong to quantitative metrics which is the most common in studies about social media engagement and its impact (Trunfio & Rossi, 2020). However, Kim and Yang (2017) argue that "strategic implication" of *like*, *comment* and *share* is not the same and that each behaviour assumes a different level and type of effort and involvement. They reason that "like requires less commitment" than *comment* and *share* which both involve "extra commitment or cognitive effort" (2017: 2). Yet, *share* has a higher level of commitment than *comment* because "when sharing a post, the post not only appears on News Feed but also goes to the user's profile page, suggesting that the shared post constitutes a part of user's self-presentation"(2017: 2). Hence, Kim and Yang (2017: 3) categorize "share as the highest, comment as the intermediate, and like as the lowest level" of engagement.

Initially we were able to automatically retrieve only textual part of the post, which represented a significant limitation since large number of posts contained photos, videos, and links. To resolve the issue, we automatically retrieved screenshots of all posts in both sets with a tool specifically developed for the purpose of this research. This tool captured entire posts, including

photos, link previews, and still video previews. Facebook posts were automatically retrieved with links to posts using Python programming language.

We eliminated the posts that were unrelated to COVID-19, narrowing the sample down to 200 posts from 'the super-spreaders' set and 135 from 'the most influential' set. All posts included in the sample were published from 01/01/2021 to 09/03/2022.

The coding sheet consisted of 37 categories that were designed to examine: 1) structural features of the Facebook page which published the post (origin, type and profile of the page); 2) if the post was flagged as false by Facebook; 3) a period in which the post was published (first, second, third, fourth or fifth wave of the pandemic); 4) composition of the post (i.e., presence of text, video, link, photo, meme or illustration in the post); 5) predominant topic of the post; 6) presence of different topics in the post; 7) sources and authorities mentioned in the post; 8) criticism of mainstream institutions and pandemic policies (e.g., scientists, government, mainstream media); 9) presence of certain discourse (nationalist, populist and religious discourse) and 10) presence of selected propaganda techniques (bandwagon, euphemism, fear, name calling) and calls to action. Propaganda techniques were selected based on the pilot analysis. Two of them — name-calling and bandwagon — are traditional propaganda devices, identified by the Institute for Propaganda Analysis back in 1937 (Sproule, 2001). Name calling, according to IPA happens when "the propagandist conjures hate or fear by attaching unattractive labels 'to those individuals, groups, nations, races, policies, practices, beliefs and ideals which he would have us condemn and reject' (Sproule, 2001: 136). Propagandist who deploys bandwagon "works to have people 'follow the crowd', to accept an idea or plan because 'everybody is doing it'" (Sproule, 2001: 136). Prato (2019: 10) explains euphemism as "figure of speech in which an appropriate expression is replaced with words or phrases that have a weaker meaning, so as to soften or conceal its excessive violence or crudeness for the sake of social expediency, or for religious, moral or even political concerns". He argues that this may lead "people to believe in the representation of reality developed by the orator, even when it is not based on verisimilitude", which is why "description of reality is often misleading and untruthful" (10). Finally, fear is a common propaganda tool that permeates much of contemporary political, public and corporate communication.

The unit of analysis was a Facebook post. Contents linked to the post (e.g., news articles, videos etc.) were coded only if the contents of the post itself were insufficient to determine the meaning of the post. The agreement between two coders was strong across all categories. It ranged from Cohen's kappa = .74 to 1. The complete Codebook is available in the Appendix B.

RESULTS· FACEBOOK PAGES

The findings indicate that most of the pages were public groups (74.3%), while around 14% out of 779 pages included in the analysis were categorized as profiles. The finding is expected, as communication, engagement and participation is the most easily achieved in public groups. Also, as the main goal of most of these pages is to 'reveal the real truth' and reach as many people as possible, public group is the easiest way to do it.

It has already been established that disinformation ecosystem does not recognize national borders (Brautović, 2022). Disinformation 'travel' freely across the borders. They travel especially fast and efficiently among countries that share similar languages. In this respect, it is interesting that 41% of all examined pages were in Serbian language and some of them in Cyrillic alphabet. This result is important because it implies that certain issues surpass nationality and political views. Around 34% of all analysed pages originate from Croatia. Pages originating from Bosnia and Herzegovina and Slovenia were present in 5% of cases each, while pages from Macedonia, Montenegro and Kosovo were marginally present in the analysed sample.

Analysis of page profiles revealed that 44% of all examined pages were specialized for some topic other than COVID-19, but on almost all of them, COVID-19 was pervasively present (see Table 2.). These pages were often specialized for conspiracy theories, such as *Ravna Zemlja* (Flat Earth) or *Teorija zavjere* (Conspiracy Theory). Political pages that represent 13% of examined sample, often contained national references like *Obitelj i Domovina* (Family and Homeland), *Mi Hrvati* (We the Croats), *Pravda i pravo* za Srbiju (Justice and Law for Serbia) or SLOVEXIT. Almost 12% of all analysed pages were pages dedicated to a certain person or personal profiles. These pages were also on top of the 'super-spreaders' and the 'most influential' lists (for examples see Brautović, 2022), while pages such as *Glavna grupa stranke Ivana Pernara* (The main group of Ivan Pernar's party), *Grupa podrške Ivana Pernara* (A group of support to Ivan Pernar), *Poštovaoci lika i djela Dr. Branimira Nestorovića* (Supporters of character and actions of Dr. Branimir Nestorović), *Hoćemo Mislava Kolakušića kao ministra pravosuđa i policije!* (We want Mislav Kolakušić as the minister of justice and police!), are among top ten super-spreaders[8]. This finding suggests that personalization is strongly

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[8]   Branimir Nestorović is a Serbian doctor who was initially a member of the Serbian crisis team for tackling the COVID-19 pandemic. However, he mainly undermined official measures proposed by the government, banalized the danger of COVID-19, campaigned against the vaccine etc., and eventually became the regional 'guru' for those who reject the mainstream pandemic narrative. Ivan Pernar is an eccentric architect of Živi zid (Human Shield), one of the first populist parties in Croatia. He

present in this universe, implying that people can more easily connect with an idea or issue if it is identified with or represented by an influential individual.

Activists' pages such as *Građansko buđenje* (Citizens' awakening) or *Buđenje svijesti* (Awakening of consciousness) were detected in almost 10% of the cases. On most of these pages people were called to "wake up", to resist, to refuse vaccines, to join the protests etc. Pages coded as those dedicated to transcendental and religious topics, alternative medicine and spiritual topics in general were found in 9.2% of the cases, and include, for instance, *Biljna ishrana — obučavanje o sirovoj biljnoj ishrani* (Bio diet — education about raw vegan diet), a page dedicated to bio food, health and viruses in general or *Protiv pobačaja* (Against abortion), a page fiercely dedicated to saints and religion.

Table 2. Profile of Facebook pages

Profile of Facebook pages (n = 779)	%
Specialised for some other topic	44.2
Political	13.7
Personal profile or a page dedicated to an individual	11.7
Activist, dedicated to fight for the "truth", "freedom" etc.	9.9
Transcendental or religious, dedicated to alternative medicine	9.2
Specialised (dedicated to COVID-19)	3.8
Something else	2.5
'News' page	2.1
Satirical	1.8
Other	0.8
Lifestyle page	0.4

Conspiracy theories were detected on 57.6% of these pages. This finding suggests that we can, at least to some extent, talk about a system or a 'universe' in which topics change but the logic and discursive set up probably remain the same. Table 3. suggests that populist discourse was vastly present on

was a Member of the Parliament from 2016 to 2020; he had been known for his antivaxx positions well before the pandemic. Mislav Kolakušić was a judge of the Commercial Court of Zagreb who resigned in order to be eligible to stand as a candidate in the 2019 election for the European Parliament with his independent list. Kolakušić campaigned by conveying strong populist messages targeting national political elites and addressing corruption. He won the mandate with 7.89% of the vote, despite his low visibility in the mainstream media and discouraging support in the polls of only 2.8% just one month before election day.

examined pages. On 58.2% of the pages people are represented as opposing the elites, while 56% of the pages make some reference to "dangerous others".9 National(ist) cues are present in 47.7% of the cases while religious references were observed on 26.7% of the pages. Call for action was observed on 28.1% of the pages.

Table 3: Discourse of Facebook pages

Discourse of Facebook pages	%
Conspiracy theories	57.6
Dangerous others	56.4
People against the elite	58.2
National(ist) references	47.7
Religious references	26.7

In sum, most of the analysed pages are public groups that originate mainly from Serbia. The most prominent profiles are the pages dedicated to a certain topic that have shifted to COVID-19 related topics, after the outbreak of the pandemic. Conspiracy theories and populist cues were detected on the majority of them.

RESULTS· FACEBOOK POSTS

FIRST SET: POSTS DEBUNKED BY FAKTOGRAF.HR

Expectedly, most of the posts debunked by Faktograf originate from Croatian Facebook pages (71%) and most of them were posted on private profiles. Significant share of posts (18%) originates from Serbian Facebook pages while some posts originate from pages from Bosnia and Herzegovina (4.7%) and Slovenia (3.3%). Since Faktograf.hr is a "third party fact-checker" for Facebook, the vast majority of the posts in the first set were flagged as false (83%). In terms of the building components, 89.5% of analysed posts contained text, 46.4% had videos, 25.4% featured memes, 18.5% contained photos and 4.3% included illustration (a cartoon or similar). Although text is the most represented element in the sample, the analysis suggests that disinformation content is highly visual, which is very much in line with

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9   For definition of populism and its indicators see for instance Mudde (2004), Hawkins et al. (2019).

trends in contemporary news media and political communication (Veneti et al., 2019). Also, the analysis measured only the presence of the text and not its quantity, which means that some posts may have contained only several words of textual announcement for visual content or a link. This additionally amplifies the importance of visual content and indicates that disinformation distributors understand the requirements of the contemporary communication environment.

As for the topics, the posts were first coded for the dominant topic, which means that coders were asked to identify *one dominant* topic in the post. The posts were then coded for the presence of different topics in the post. Table 4. demonstrates the share of dominant topics in the Faktograf set.

Table 4. Predominant topics in the posts

	Dominant topic of the post
Conspiracy against the people (to subjugate the people, to strip them of their rights and freedom, to implement the new world order, to implement "total control" and similar)	31.5%
Vaccine (origin, concerns, consequences, effectiveness etc.)	21%
Criticism of pandemic policies in general	18.5%
Protests against pandemic measures, including mask mandate, vaccination etc.	11.2%
Profit and corporate conspiracies (of Big Pharma, Bill Gates and similar)	6.9%
Something else	4%
Criticism of national pandemic measures	2.9%
5G Network	2.5%
Origin of the COVID-19 pandemic	1.4%

The most represented topic is *conspiracy against the people* which dominates about one-third of examined posts (31.5%). It is followed by vaccine-related topics (21%) and criticism of pandemic measures (18.5%). As for the presence of topics in the posts, criticism of pandemic measures was present in almost half of the posts (47.1%), references to conspiracy against the people were present in 45.7% of the posts, dangerous effects of the vaccine were mentioned in 31.2% and criticism of pharmaceutical industry in 19.9% of the posts. Inefficiency of the vaccine was mentioned in 17.8% of the posts, composition of vaccine in 15.6% of the posts and origins (causes) of the pandemic were present in 13.8% of the posts. Bill Gates was mentioned in 10.9% of analysed posts.

Table 5. demonstrates authorities (persons) used to support the claim in the post.

Table 5. Authorities

	Authorities used to support the claim
Authority / Person is not mentioned in the post	44.5%
Non-Croatian doctor or a scientist	17%
Common citizen	10.5%
Somebody else	10.1%
Celebrity	7.6%
General terms such as 'experts', 'scientists'	4%
Croatian doctor or a scientist	3.3%
Politicians	2.9%

The most common sources of authority in this set are non-Croatian 'maverick' doctors and scientists who question mainstream solutions and agendas proposed by governments and mainstream scientists. They are commonly recognized as 'gurus' of the Facebook community immersed in alternative narratives. One such example is a Serbian doctor Branimir Nestorović whose words seem to have prophetic effect on the audiences.

Common citizens with their testimonies appear as the next most relevant source of 'truth' (in 10.5% of the posts).

Some of the posts explicitly criticize mainstream institutions and scientists who advocate mainstream solutions to the COVID-19 crisis: 23.6% of the posts contain criticism of scientists, 14.5% of the posts criticize the media and 12.7% criticize Croatian institutions in charge of the pandemic crisis.

Table 6. indicates that the most prevalent propaganda technique is fear, present in 41.3% of the posts.

Table 6. Propaganda techniques

Propaganda techniques	
Fear	41.3%
Banalization (euphemism)	34.4%
Name calling	21.7%
Bandwagon	14.9%

Banalization (euphemism) is the next most represented technique, present in 34.4% of the posts. It tends to downsize the severeness of the disease,

usually by comparing it to a flu, asserting that the number of deaths of the virus are being exaggerated or similar. Other relatively represented technique is *name calling,* detected in 21% of the posts. Table 7. features some of the labels found in all three sets. The names used to label the process (the pandemic), "us" (the people), "them" (the elites) and the "dangerous others" (people who comply with the measures or "are to blame for the outburst of the pandemic", such as the Chinese) work as powerful discursive mechanisms.

Table 7. Examples of *name calling* (retrieved from all three sets)

Pandemic	"Them" — elites and creators of the "plandemic"	"Dangerous others"	"The people"
Puppet show	A Davos clique	*Homo Idiots / Homo Glupens*	Slaves
Plandemic	Globalists	Covidiots	Animals in the ZOO
Corona fraud	Capakovići (Krunoslav Capak, one of the key people in charge of the crisis communication, head of Croatian Institute for Public Health)	Ninja virus	Concentration camp prisoners
Pandemic of lies		Emoji sheep	
#FakeCorona		Corona — vaxxers	
Concentration camp		Pawns	
Nazi-fascist laws		Zombies	
Third Reich	Đikić (Ivan Đikić, prominent international scientist, proponent of mainstream solutions to the crisis)	Sheep	
Cabala			
Dictatorship			
Corona fascism	Đikani of Rothschild medicine		
Sanitary dictatorship	Mafia		
Genocide (vaccination)	Mass murderer virologist (Bill Gates)		
Yellow Patch (a reference to Holocaust)	Pharmacomafia		
Circus corona	Regime media		
Media and political masquerade	World poisoners		
	Paid poltroons		
	Quacks		
	Mask gestapo		
	Nazis		
	Decadent Western scum		

Bandwagon is a propaganda technique aimed at creating a sense of massive engagement — everybody is jumping on the bandwagon (of protests against covid measures, for instance). It was detected in 14.9% of the posts. In addition to propaganda techniques, the posts were coded for two devices that were observed during the coding process. The decision was made to include them in the codebook and to recode the posts. C*reating a sense of 'exclusivity'* among the group members is a tactics which works so to convince the members of the community that they have privileged access to

information "that the government doesn't want you to see". This tactic is present in 20.7% of the posts. *Call to action* is a persuasive tactics aimed at mobilising followers and encouraging them to "take action" — to take part in the protests, refuse to wear masks, decline vaccine or just to share the post. It is present in more than one-third of the posts (33.7%).

Finally, content analysis examined presence of three discourses — national(ist), religious and populist discourse. The first two discourses were identified through the presence of national and religious reference in the posts (mention of the nation, flag, homeland, God, devil etc.). The post was coded positive for the presence of the populist discourse if it implied that the people are being oppressed by the elites or if it opposed the people to the elites. Additional indicator of the populist discourse was the presence of the "dangerous others" who are, as explained earlier, usually identified among those who comply with the measures or among minorities who "contribute" to the crises (Chinese, migrants etc.). Nationalist discourse was found only in 2.9% of the posts, religious in 8.3%, while populist discourse was identified in 25.7% of the posts, with the "dangerous others" being mentioned in only 5.4% of the posts. These findings suggest that the populist discourse is quite pervasive, which is line with the finding that the "conspiracy against the people" is the most dominant topic in the set.

SECOND AND THIRD SET: POSTS RETRIEVED FROM THE SETS OF 'SUPER-SPREADER' AND 'THE MOST INFLUENTIAL' FACEBOOK PAGES

These two additional samples were included in the research to examine if other content on the pages that were 'infected' with disinformation debunked by Faktograf contain similar cues as the initial sample. In this way we expanded our research corpus beyond intended sample outlined by Faktograf. Two additional samples were retrieved from 20 Facebook pages that were classified as the 'most influential' and 20 Facebook pages that were classified as the 'super-spreaders'. From each of these two sets we generated 300 posts with the biggest engagement, measured by the number of 'shares'. In the super-spreaders' set number of shares ranged from 1990 to 227; in the 'most influential' set number of shares ranged from 26369 to 376 shares. The most shared post in the 'super spreaders' set is a meme from a Slovenian page *Otrok ne damo* (We'll protect our kids); the most shared post from the 'most influential' set is a native video from a 'news' site *Logično*. We eliminated the posts that were unrelated to COVID-19, narrowing the sample down to 200 posts from 'the super-spreaders' set and 135 from 'the most influential' set. It is important to emphasize that the posts from these two samples have not been treated as disinformation (unlike the posts from the Faktograf set).

Only 5.9% of the posts from the super-spreaders set and 6% of the posts from the most influential set were flagged as false by Facebook. However, our starting assumption was that these samples may demonstrate similar features as the posts from the Faktograf sample.

The first interesting finding is that most posts from 'the super-spreaders' (SUS) and 'the most influential' (MI) set originate from Serbian Facebook pages (53.3% and 77.5% respectively). Other posts in the SUS set originate from Slovenian and Croatian FB pages (26.7% and 20% respectively) while other posts in the MI set were published on the pages from Croatia (12%), Bosnia and Herzegovina (9.5%) or some other country (1%).

Most of the posts in both sets contained text (62.2% in the SUS set and 67.5% in the MI set). While 'super-spreaders' predominantly relied on links to different sources (mainstream media, alternative media, YouTube videos and similar) to support their claims (in 47.6% of the posts), 'most-influential' posts relied primarily on videos (in 50% of analysed posts from that set). Interestingly, top 20 most shared posts from our MI set all contained native videos. Top 20 most shared posts from the SUS set were text based or focused on memes, photos, links to mainstream or alternative media and in several cases contained native video.

Other elements used in the SUS set were photos (34.8%), memes (28.1%), videos (13.3.%) and illustrations in 4.4% of the posts. Other elements used in the MI set were memes (38.5%), links (15.5%), photos (8.5%) and illustrations in 1% of the posts.

Table 8. shows prevalence of topics in these sets.

Table 8. Predominant topics in SUS and MI posts

	Dominant topic of the post	
	'Super-spreaders'	'Most influential'
Origin of the COVID-19 pandemic	1.5%	0.5%
Vaccine (origin, concerns, consequences, effectiveness etc.)	14.8%	20%
Protests against pandemic measures, including mask wearing, vaccination etc.	22%	22.5%
Criticism of pandemic policies in general	17%	14.5%
Criticism of national pandemic measures	11.9%	10.5%
Profit and corporate conspiracies (of Big Pharma, Bill Gates and similar)	4.4%	4.5%
Conspiracy against the people (to subjugate the people, to strip them of their rights and freedom, to implement the new world order, to implement "total control" and similar)	17.8%	22%

5G Network	5.2%	0.5%
Something else	5.2%	5%

Most posts in both sets predominantly focused on protests, followed by conspiracy against the people in both sets and then by the criticism of pandemic policies in the SUS set and vaccine-related topics in the MI set. Presence of topics in the posts is presented in Table 9.

Table 9. Presence of topics in SUS and MI sets

	Presence of topics in the posts	
	"Super-spreaders"	"Most influential"
Origin of the COVID-19 pandemic	12.6%	9%
Composition of the vaccine	5.9%	5.5%
Consequences of the vaccine	14.1%	11%
Inefficiency of the vaccine	12.6%	12.5%
Criticism of pharmaceutical industry	9.6%	12%
Bill Gates	5.2%	9%
Conspiracy against the people (to subjugate the people, to strip them of their rights and freedom, to implement the new world order, to implement "total control" and similar)	28.1%	34%
Criticism of pandemic measures	52.6%	62.5%

Criticism of pandemic policies and measures is present in majority of examined posts in both sets. Conspiracy against the people is well represented but still significantly less than resistance to policies that imposed a new framework of life.

Authorities used to support the claim are listed in Table 10.

Table 10. Authorities used to support the claim in SUS and MI sets

	Authorities used to support the claim	
	"Super-spreaders"	"Most influential"
Celebrity	4.4%	6%
Croatian doctor or a scientist	4.4%	1.5%
Non-Croatian doctor or a scientist	16.3%	10%
General terms such as "experts", "scientists"	2.2%	1.5%
Politicians	8.9%	6%

Common citizen	8.9%	12.5%
Somebody else	10.4%	7.5%
Authority / person is not mentioned in the post	44.4%	55%

Most of the posts in both our sets do not make a reference to another person (authority) to support their argument. It would be worthwhile to examine if such behaviour is an indicator of what Liesbet Van Zoonen (2012: 17) identifies as *I-pistemology*, a notion that in a context of declining trust in traditional knowledge institutions (politics, media, universities) *I, myself*, become the "origin of all truth".

Those posts that use another person's authority to support their argument rely mostly on non-Croatian doctors and scientists or common citizens. The former are more prominent in the SUS set and the latter in the MI set. This is particularly interesting because some of the most prominent super-spreader pages are basically fan pages devoted to promotion of certain individuals, such as *Poštivaoci lika i djela Branimira Nestorovića* (Admirers of character and actions of Branimir Nestorović, see Image 1).

Image 1. Posted on Poštovaoci lika i djela dr. Branimira Nestorovića: "The days are beautiful, go out and hang out, you all probably already have corona, why would you be afraid then."

Both sets contain criticism of scientists who advocate official solutions, as well as the media who promote these solutions, along with the official narrative. In the SUS set mainstream scientists are criticized in 17.8% of the posts and media in 11.1% of the posts. In the MI set scientists are criticised in 22.5% of the posts and media in 13% of the posts. Croatian institutions in charge of the pandemic are being criticised in 10.4% of the posts in the SUS set and 3.5% of the posts in the MI set. These results suggest that the tactics of a relevant number of influencers and super-spreaders is to encourage suspicion in science. Distrust of science is, according to Mirjana Tonković et al. (2021), an important predictor of conspiratorial thinking in Croatia. Moreover, Tonković et al. (2021: 9) suggest that: "... many COVID-19 conspiracies imply that scientists and science are to be blamed for the pandemic (e.g., COVID-19 originated from the science laboratory, COVID-19 vaccine exists but it is kept secret, the real number of infected people is hidden, etc.)". Table 11. demonstrates the use of propaganda techniques in these two sets.

Table 11. Propaganda techniques

	Propaganda techniques	
	'Super-spreaders'	'Most influential'
Bandwagon	22.2%	25%
Fear	32.6%	23%
Name calling	19.3%	24%
Banalization (euphemism)	29.6%	37%

In terms of propaganda techniques, both examined sets demonstrate similar characteristics. Nevertheless, dominant strategy of influencers is *banalization*, while super-spreaders are most likely to resort to *fear*. Also, compared to the Faktograf set, they are more likely to use bandwagon, which makes sense given that protests are the main topic in SUS and MI sets. Image 2. illustrates the use of the bandwagon technique in relation to protests.

Call for action was detected in almost one third of examined posts in both sets (28.9% and 28% respectively), while suggestion that the community is being granted a privileged information was weakly represented, with 6.7% in the SUS set and 6% in the MI set.

Finally, the analysis has revealed that, like in the initial set, the most prominent discourse in examined posts from SUS and MI sets is *populist discourse*. It was observed in 22.2% of the posts from SUS set and 37% of the posts in the MI set. "Dangerous others" were significantly more present in the SUS set than in the MI set (10.4% compared to 4%), which is in line with the choice of propaganda techniques and the supers-spreaders' dominant reliance on fear (see Image 3).

Image 2. The use of *bandwagon:* "St. Marko's Square: WE SHALL ALL BE THERE! The D Day. Article 23. Of Croatian Constitution: (1) Nobody can be subjected to any type of harassment or to medical or scientific experiments, without his/her consent. #NOSURRENDER, PEOPLE'S REFERENDUM"

Image 3. "Dangerous others" in the SUS set: "The problem is that 71.180 Serbs returned to THEIR OWN home while 1.000.180 migrants who entered Serbia without medical control is not a problem?!"
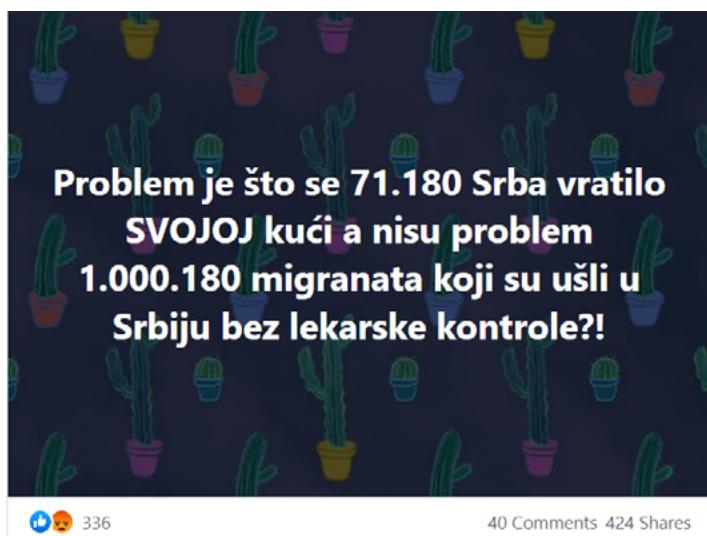
National references were present in 5.9% of the posts in the SUS set and 10% of the posts in the MI set. Religious references were present in 5.2% of the SUS posts and in 5.5% of the MI posts.

DISCUSSION AND CONCLUSION

This study is one of the first content analyses of COVID-19 related disinformation posted on Facebook in Croatia. Its goal was to understand how disinformation is constructed and to examine topics, agents, propaganda techniques and discourses that appear in the universe that at some point engaged with disinformation. Analysis was conducted using two units of analysis — a Facebook page and a Facebook post. The sample of pages and posts for content analysis was constructed based on a population of disinformation debunked by a Croatian independent fact-checking organization Faktograf. We used social network analysis to expand Faktograf's initial set and to capture universe of Facebook pages that were 'infected' with disinformation. We used this expanded universe to retrieve sample of pages and additional sample of posts.

The analysis of 779 Facebook pages points to three main conclusions. First, the majority of examined Facebook pages entangled in Croatian disinformation universe are from Serbia. This suggests that the influence of Serbian disinformation hubs in Croatia is substantial. Second, the analysis indicates that the Facebook pages captured by our SNA are generally prone to conspiracy theories. It means that topics change, but discourses tend to remain the same. The most robust in this sense is a populist discourse observed in almost 60% of the pages. This is very much in line with the survey research of Tonković et al. (2021) who found out that almost a quarter of respondents in Croatia agreed with conspiracy theories related to COVID-19 and that belief in conspiracies was associated with lower levels of education, lower economic standard, greater role of religion and lack of political self-identification (2021: 7). Deconstructing relationship between populist sentiment and susceptibility to conspiracy theories represents a potent avenue for future research. Another important finding related to Facebook pages pertains to the profile of the pages. The best represented are the pages 'specialized' for certain topics, quite often for conspiracy theories, such as *Ravna zemlja* (Flat Earth). However, interesting is the influence of private profiles in the sample, as well as the influence of fan pages that are dedicated to idolization of a single person (usually a maverick politician or a doctor). These individuals tend to acquire status of 'gurus' in their community and to become faces of resistance and struggle for 'real truth'. Therefore, it seems vital to address authority and persuasive power of these influencers in future studies.

The analysis of Facebook posts included disinformation debunked by a Croatian fact-checking organization Faktograf, as well as two additional sets of posts retrieved from Facebook pages that were 'infected' by disinformation identified by Faktograf. The structural difference between the Faktograf set and additional two sets, that include the most shared posts from the 'most influential' and the 'super-spreader' Facebook pages from our universe is that a) posts from the Faktograf set are treated as disinformation while posts from the other two sets are not and b) Faktograf set represents a population of debunked posts while the other two sets represent a sample generated by SNA.

Majority of posts debunked by Faktograf were predominantly focused on conspiracy theories i.e., assumption that powerful elites secretly manipulate the events for their own benefit and in such a way to harm the people. The most prominent agents in these posts, when they are mentioned, are dissident doctors or scientists who come to embody resistance against mainstream policies and approaches. The most prominent propaganda technique in these posts is fear, usually of vaccine and other policies and approaches deployed to fight the pandemic. Name calling, that appears in about 20% of debunked posts, is an important discursive mechanism that seems to strengthen the identity of "us" (the people) against "them" (the elites and others who endanger the people). While references to religion and nation where only vaguely present, populist discourse was observed in one quarter of posts debunked by Faktograf.

The other two sets are probably more representative of the entire universe. Interestingly, almost all analysed posts, from all three sets, predominantly focus on one of the topics offered in the codebook suggesting that the posts that are not *a priori* considered disinformation, demonstrate similar features as the posts debunked by Faktograf. Dominant topics in the 'most influential' and the 'super-spreaders' set are protests, followed by conspiracy theories. However, criticism of pandemic measures is present in the majority of examined posts, which suggests that people were utterly annoyed by the 'new normal' and imposed framework of life that distorted their routines and reduced their freedoms. The analysis of key agents and authorities has revealed that, like in the Faktograf set, the most prominent sources of authority are non-Croatian doctors and scientists, followed by 'ordinary citizens'. These two sets also contain criticism of mainstream actors, primarily of mainstream scientists and then of the mainstream media. This finding suggests that raising suspicion and cynicism about science is an indicative feature of the examined universe.

In the 'super-spreader' set the most used propaganda technique is again, fear, followed by banalization or efforts to downplay or even ridicule

the danger of the pandemic. In the 'most-influential' set the most prominent technique was banalization, followed by the bandwagon. Populist discourse was rather well represented in both sets. National(ist) cues were considerably less represented, while references to religion were observed only in few posts.

In sum, the results of content analysis suggest that there are considerable similarities between characteristics of the posts containing disinformation debunked by a Croatian fact-checker and other contents in the adjoining universe charted by SNA. The findings emphasise the regional character of the disinformation network, which consequently points to the relevance of the regional fact-checking networks. The research also indicates the importance of certain personalities who come to embody alternative narratives. The results suggest that the COVID-19 related contents in the examined universe boil down to a handful of topics and their variations: conspiracy theories, including introduction of the "new world order" and "total control", vaccine, criticism of pandemic measures, topics related to protests and resistance against the measures and finally, the role of Big Pharma, Bill Gates and 5G network. Propaganda strategies that we tested in this study were found in all three sets, with the fear and banalization (euphemism) being the most prominent techniques. Intensive reliance on visual elements to convey the message suggests that communicators in this universe are very well acquainted with the logic of contemporary communication matrix. Particularly relevant is the finding that the most shared posts in our data set were native videos.

Although the findings suggest that the conspiratorial discourse is entrenched in the examined universe, the study also captured strong resistance and disdain for pandemic measures. This may suggest that disappointment with how institutions have been handling and communicating the crisis is pushing the audiences towards disinformation and conspiracies.

LIMITATIONS

There are several limitations to this study. The most important one is accessibility and availability of Facebook pages and posts, which is a matter of Meta's policies. This problem has been addressed by researchers world-wide. One of the contributions of this project is that it developed automated solution to store screenshots of Facebook posts, saving them from disappearing. However, much of the Facebook content remains unavailable to researchers. Other limitations mainly concern our research design created to analyse Facebook pages. First, we measured only presence of certain elements on the page and not their prominence. For instance, we don't know if conspiracy theory appeared only once on examined page or if conspiracy

theories appear systematically. Second, the page may contain contents that challenge narratives and discourses detected in our research, but they were not investigated in this study. Third, a significant number of pages that were not in the former Yugoslav languages were excluded from the research. Fourth, our entire research is based on a population of selected posts (filtered and debunked by Faktograf) and on a sample retrieved from the universe captured by SNA which is again, based on the same set of debunked disinformation. Therefore, the results presented here may be biased and should be considered representative only of the population captured by SNA. Finally, the research of disinformation content should be expended to other types of outputs (e.g., mainstream media) that contribute to dissemination of disinformation, as suggested by Wardle's (2018) "trumpet of amplification".

RESEARCH PERSPECTIVES

Important research perspectives within and beyond Pro-Fact project include: a) investigating the role of populism in disinformation universe and its relationship to conspiratorial thinking; b) investigating power and influence of disinformation 'gurus'; c) applying automated content analysis on a larger sample of posts, based on a codebook attached to this study (see Appendix B) and d) investigating the role of mainstream media in disinformation universe by automatically detecting all posts that contain content that originates from mainstream media (links, photos, videos etc.) and analysing its use and purpose in the posts.

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APPENDIX A

Code sheet: Facebook pages

ID _____

1. Data set

1. The most influential
2. Super-spreaders

2. Origin of the Facebook page

1. Croatia
2. Serbia
3. Bosnia and Herzegovina
4. Slovenia
5. Other country (if possible, register which one)

3. Type of the FB page

1. Private profile
2. Page (business/brand)
3. Page (community/public person)
4. Public group
5. Private group
6. Event

4. Profile of the FB page

1. Fan page (dedicated to promotion (usually also glorification) of one person, e.g., Mislav Kolakušić, Ivan Pernar, Branimir Nestorović)
2. Specialized (dedicated to corona / COVID-19)
3. Specialized for some other topic (which one?)
4. Political
5. Satirical
6. 'News' page
7. Lifestyle page
8. Activists' page (dedicated to fight for 'truth', 'freedom', 'redemption', 'liberation' etc.)
9. Transcendental or religious (i.e., dedicated to transcendental or religious topics, spiritual growth or similar)

10.   Something else

Note: This is not an official Facebook categorization of the page. You need to assess what is the self-identification of the page or what is the main focus of the page and code accordingly.

DISCOURSE

5.   **Does the page contain conspiracy theories (e.g., chem-trails, digital control, conspiracies related to migrants, vaccination, USA and similar)?**

1. Yes
2. No

6.   **Does the page confront the people to elites?**

1. Yes
2. No

7.   **Does the page identify 'dangerous others' (e.g., migrants, sexual or ethnic minorities, European Union etc.)?**

1. Yes
2. No

8.   **Does the page contain religious references (verbal such as 'God, devil' or visual symbols, such cross or similar)?**

1.   Yes
2.   No

9.   **Does the page contain nationalist references or symbols (verbal, such as 'homeland', 'we the Croats', 'brothers Serbians', or visual, such as national flag etc.)?**

1.   Yes
2.   No

10. **Does the post contain call to action (e.g., 'Don't get vacci-nated! Join the rally! Don't mask up! Teach your children**

how to refuse tests', etc.)?

1. Yes
2. No

APPENDIX B

Code sheet: Facebook posts

THE STRUCTURE

ID ___

1.   **Data set**

  1. The most influential
  2. Super-spreaders
  3. Faktograf.hr

2.   **Origin of the Facebook page that posted the post**

  1. Croatia
  2. Serbia
  3. Bosnia and Herzegovina
  4. Slovenia
  5. Other country (register which one)

3.   **Type of the FB page that posted the post**

1.   Private profile
2.   Page (business/brand)
3.   Page (community/public person)
4.   Public group
5.   Private group
6.   Event

4.   **Profile of the FB page that posted the post**

1.   Fan page (dedicated to promotion (usually also glorification) of one person, e.g. Mislav Kolakušić, Ivan Pernar, Branimir Nestorović)
2.   Specialized (dedicated to corona / COVID-19)
3.   Specialized for some other topic (which one?)
4.   Political
5.   Satirical
6.   'News' page
7.   Lifestyle page
8.   Activists' page (dedicated to fight for 'truth', 'freedom', 'redemption', 'liberation' etc.)
9.   Transcendental or religious (i.e., dedicated to transcendental or religious topics, spiritual growth or similar)
10. Something else

Note: This is not an official Facebook categorization of the page. You need to asses what is the self-identification of the page or what is the main focus of the page and code accordingly.

5. Has Facebook labelled the post as a *false information?*

1. Yes
2. No

6. Period in which the post was published:

1. First wave — March–June 2020
2. Second wave — August 2020–February 2021
3. Third wave — March–June 2021
4. Fourth wave — August–December 2021
5. Fifth wave — July 2022–

The post contains:

7. Text	1.Yes 2.No
8. Video	1.Yes 2.No
9. Link	1.Yes 2.No
10. Photo	1.Yes 2.No
11. Meme	1.Yes 2.No
12. Illustration	1.Yes 2.No

TOPICS

13. The dominant topic of the post is:

1. The origin of the pandemic and the virus COVID-19 (e.g., virus was produced in the lab etc.)
2. Vaccine (origin, consequences, effectiveness or expediency, vaccine refusal etc.)
3. Protest against measures and/or vaccine (protests, boycott of different COVID-19 measures, mobilization to join the protests, 'people are rising' etc.)
4. Criticism of pandemic measures in general
5. Criticism of national pandemic measures (e.g., Croatia, Serbian, criticism of the crisis communication headquarters etc.)
6. Profit and/ or global conspiracy of big corporations (e.g., big pharma, Bill Gates, George Soros),
7.

8. Conspiracy against the people and/or humanity aimed at su-pressing the people and introducing the new world order ('system of total control' or similar)
9. Introduction of 5G network and its consequences
10. Something else (what?)

Note: *Although more than one topic will appear in most of the posts, try to assess which SINGLE topic is* <u>the most dominant</u>.

The post mentions:

14. Causes /origins of the pandemic and the COVID-19 virus
1.Yes 2.No
15. Composition of the vaccine (e.g., chips, foetuses)
1.Yes 2.No
16. Consequences of the vaccine (e.g., causes death and similar)
1.Yes 2.No
17. Inefficiency of the vaccine
       1.Yes 2.No
18. Pharmaceutical industry and its profit from the pandemic
1.Yes 2.No
19. Bill Gates
       1.Yes 2.No
20. Global conspiracy against humanity
       1.Yes 2.No

21. Does the post contain criticism of pandemic measures (e.g., of Covid passes, lockdowns or similar)?

1. Yes
2. No

SOURCES AND AUTHORITIES

22. Source used in the post to support the main argument:

1. Croatian mainstream news outlet
2. Foreign mainstream news outlet
3. Alternative news outlet (non-mainstream)
4. Alternative YouTube channel
5. Facebook post of an individual
6. Medical journal
7. Something else
8. No source

23. Actors mentioned in the post to support the main argument:

1. A celebrity (e.g.., Novak Đoković, Toni Cetinski, Jordan Peterson ...)
2. Croatian doctor or scientist
3. Foreign doctor or scientist (e.g., Dr. Branimir Nestorović)
4. 'Experts' or 'scientists' in general, without mention of a name
5. A politician (e.g., Marin Miletić, Mislav Kolakušić, Zoran Milanović ...)
6. 'Common people' (acquaintances, students, participants in demonstrations, people who provide their testimonies etc.)
7. Somebody else
8. There is no actor

Note*: If you code 1, 2, 3 or 4, write the name of the actor.*

24. Does the post criticize scientist(s) who advocate vaccination / measures / claim that corona is a dangerous disease?

1. Yes, it criticises his/her/their theses and statements
2. Yes, it questions his/her/their scientific credibility
3. Yes, it criticises his/her/their theses and statements and questions his/her/their scientific credibility
4. No

25. Does the post criticize Croatian institutions (the Headquarters, the Government, Croatian Institute for Public Health, ministries ...) and/or their pandemic related measures, statements and activities?

1. Yes
2. No

26. Does the post criticize mainstream media reports (e.g., 'they are lying', 'they are hiding the truth from you'…)?

1. Yes
2. No

DISCOURSES AND PROPAGANDA TECHNIQUES

27. Does the post confront the people to elites (e.g., 'They are enjoying themselves while people suffer.')

1. Yes
2. No

28. Is there a reference to "dangerous others" in the post (to a group which allegedly endangers the people and 'us', such as 'the migrants who brough us COVID-19', vaccinated people, Chinese etc.).

1. Yes
2. No

29. Does the post use 'bandwagon' technique'? (Creating an impression that everybody is doing something — 'jumping a bandwagon'. E.g., 'mass support', 'everybody is joining the protests', 'the people are rising' etc.).

1. Yes
2. No

Note: Pay attention to visual elements in the posts. Bandwagon effect may be created using visual images only.

30. Is fear present in the post i.e., is the post trying to scare someone?

1. Yes
2. No

31. Does the post contain religious references (verbal such as 'God, devil' or visual symbols, such cross or similar)?

1. Yes
2. No

Note: Write them down.

32. Does the post contain nationalist references or symbols (verbal, such as 'homeland', 'we the Croats', 'brothers Serbians', or visual, such as national flag etc.)?

1. Yes
2. No

33. Does the post contain 'empty signifiers' (e.g., freedom, salvation, new normal etc.)?

1.   Yes
2.   No

34. Does the post contain 'naming' or 'stereotyping' (e.g., COVID-dictator, COVID-fascism, Nazis, Third Reich)?

1. Yes
2. No

35. Does the post tend to downsize the danger of COVID-19 (e.g., 'it is a flue, death rates are being exaggerated' etc.)?

1.   Yes
2.   No

36. Does the post suggest that shared information is 'exclusive' (e.g., 'You won't find this in the media')?

1.   Yes
2.   No

37. Does the post contain call to action (e.g., 'Don't get vaccinated! Join the rally! Don't mask up! Teach your children how to refuse tests. Share this post as much as you can', etc.)?

1.   Yes
2.   No

About authors

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MILICA VUČKOVIĆ is a researcher and teaching assistant at the Faculty of Political Science, University of Zagreb. She earned her PhD in communication sciences from the Faculty of Social Sciences in Ljubljana where she specialized in online political communication. Before that, she graduated Political Science from the Central European University and Journalism from the Faculty of Political Sciences in Zagreb.

She is currently teaching several courses: Media and the Public; Political Communication; and Propaganda and Disinformation. Her main research interests concern political communication on social media platforms. She also collaborates on several ongoing research projects. Before joining the Faculty of Political Science, Milica worked as a public relations specialist focusing on political election campaigns.

The Project 'Pro-fact: Research, education, fact-check and debunk COVID-19 related disinformation narratives in Croatia' is tackling disinformation related to COVID-19 on multiple levels by a multidisciplinary and intersectoral approach. Through research, awareness raising, and capacity-building methods, the project comprehensively approaches the social, political, and health problem of spreading disinformation campaigns related to COVID-19. Through its activities, it aims to effectively expose COVID-19 related disinformation campaigns in Croatia, strenghten the Croatian multidisciplinary team capacities for detecting and combatting disinformation campaigns, and to increase media literacy competencies of Croatia journalists and the general public.

The coordinator of the project is Gong, while the partner organisations are: the Faculty of Political Science in Zagreb, The University of Dubrovnik, Faktograf.hr, and the Faculty of Electrical Engineering and Computing.