



COVID-9.11¹

The transformation and anti-West radicalization of the Hungarian antivax movement

Lóránt Győri
Dominik Istrate



November 2021

¹ The title refers to the antivax protest held by new leader of the antivax movement Dr. György Gődény in front of the U.S. Embassy in Budapest on September 11, 2020.

CONTENTS

Executive summary	3
Introduction	4
The transformation of the Hungarian antivax-community.....	5
Hypotheses	6
Methodology	6
A timeline of the development of the Hungarian anti-vax movement.....	7
A leader emerges.....	7
Institutionalization and professionalisation of the movement	7
Protests and petitions	8
Financial interests behind the antivax-movement.....	8
Backlash against the movement.....	9
The radicalization of the Hungarian antivax movement	10
A qualitative analysis of antivax media strategies.....	10
A quantitative analysis of antivax communication	11
Trendlines of (dis)information narratives	11
Top performing Facebook posts.....	16
Status quo and generational change	16
Narratives of geopolitics, conspiracy and activism.....	20
Content sharing on the fringes: competition instead of cooperation	25
Statistical analysis	25
Network analysis.....	28
Patterns or radicalization: cross-pollination	33
Annex 1.....	34
Annex 2.....	36
Annex 3.....	37

EXECUTIVE SUMMARY

- **The coronavirus pandemic in Hungary created an infodemic unprecedented both in its scale and nature, profoundly impacting the country's anti-vax community which transformed from a small circle of parents concerned over childhood-immunization into a hyperactive, network-building movement mainstreaming disinformation and conspiracy theories. As a result, the Hungarian vaccination campaign is rather stagnating, with only 66 percent of the adult population being fully vaccinated (compared to the EU average of 75%).**
- **The Hungarian government's autocratic communication style has fallen into his own trap since the pro-government media's years-long peddling of political conspiracy theories prevented it from successfully promoting its pro-vaccine agenda.**
- **Established itself through social media, the Hungarian anti-vax community is predominantly led by a new generation of self-proclaimed/alternate health experts** such as Dr. György Gődény who, as the prominent member of the leading branch of the antivax movement called the Doctors for Clarity, is leading a crusade against COVID-19 vaccines through a newly established network of clickbait homepages, social media pages and groups.
- **Our media research clearly suggests a strong link between the Hungarian anti-vax community and the far-right and pro-Kremlin subculture: the Hungarian anti-West far-right messages were picked up by the new antivax movement**, such as the alleged "eugenics" plan executed by Bill Gates, Henry Kissinger, or George Soros;ⁱ or that the novel coronavirus was released by the West to bring down China.ⁱⁱ
- **According to research data, two societal mechanisms can be identified in the online radicalization of the new Hungarian antivax movement. First, a high degree of synchronisation occurred between the networks of far-right and antivax fringe media** which shared 33,74 % of all domains in 2020 and 41,82% 2021 in a form of hyperlinks used in their messages, contributing to the spread of far-right conspiracy theories in antivax communities led by prominent pro-Kremlin conspiracy sites, such as Awakening the World. **Second, the antivax movement became a novel and primary producer/consumer of geopolitically charged disinformation narratives being in an open competition** with the far-right and pro-Russian Our Homeland (Mi Hazánk) party for the same anti-establishment audience.
- **The interaction between the far-right and antivax movements resulted in an anti-West, more specifically, anti-US turn of the Hungarian antivax communication.** A prime example of this attitude was on plain sight during the "COVID 9.11" protest organised by the leader of the antivax movement Dr Gődény in September 2020. **Whereas far-right narratives were more Eurosceptic and pro-Russian.**
- **When it comes to China, however, Hungarian discourses in the anti-vax and far-right communities both displayed a high level of anti-Chinese propensity**, once again confirming China's damaged image over the pandemic.
- **The antivax communication was supercharged by the new social media network capable of mobilising at least a 100.000 strong-audience online and thousands offline.** The new antivax movement has become the real engine of mobilisation in Hungary in 2021, with 18% of all their sampled messages calling for some form of activism, as opposed to only 1% of far-right messages, despite all the efforts of social media platforms to ban such contents.
- Despite the anti-vaxxer and far-right movements fearmongering and disregard for public safety measures, **the Hungarian authorities were quite slow in their reaction to vaccine-sceptic communication** due to the Hungarian government's preoccupation with the opposition, its disinformation campaign supporting Russia or China against the EU or the West, which even further **bolstered the anti-government communication of the antivax movement.**

INTRODUCTION

The outbreak of the global pandemic at the beginning of 2020 has not only caught governments off guard all over the world, but also forced authorities to find some balance between containing the epidemic, by providing the resources needed for the health system, and keeping the basic economic activities afloat. An even bigger problem proved to be the renewed strength of the national and international anti-vaccine movements that have been organising in protest to the new health measures and the new COVID-19 vaccines by promoting non-scientific health remedies and disinformation, conspiracy theories about the “dangers” associated with vaccination programs. According to a recent Eurobarometer Survey conducted on the *Attitudes on vaccination against Covid-19* in May 2021,ⁱⁱⁱ some degree of vaccine-hesitancy can be attributed to 20-25% of the population of the European Union which provide antivaxxer movements a quite powerful political legitimacy and a social base to rely on against health professionals (trusted by 61% on COVID-19 vaccines), national health authorities (trusted by 44%), the EU (trusted by 20%), and national governments (trusted only by 19% on COVID-19 vaccines).² Anti-establishment attitudes related to the current emergency are a product of both the successful vaccination programs of the past that allowed a minority to oppose traditional vaccinations with no real consequences provided the population’s herd-immunity and a global crisis in leadership.³

² The survey shows 75% agree that COVID-19 vaccines are the only way to end the pandemic, while only 69% are either already vaccinated, or eager to be vaccinated as soon as possible, with 79% of respondents intending to get vaccinated until the end of 2021.

³ Overall, only 51 and 53% of respondents trust traditional media and government respectively to provide them with solutions and leadership in the current crisis, according to the 2021 Edelman Trust Barometer global survey. Instead, “moral entrepreneurs” or new pandemic “experts” took the stage who promised easy answers to a variety of complex problems in order to quickly ease individuals’ and communities’ fears by downplaying health or economic threats to one’s wellbeing. For more, please see: <https://www.edelman.com/trust/2021-trust-barometer>

THE TRANSFORMATION OF THE HUNGARIAN ANTIVAX- COMMUNITY

In Hungary, the infodemic caused by the epidemic was driven by a peculiar set of domestic factors. Although, the Hungarian public and the government reacted initially quickly to the first wave of the pandemic in March 2020 by enacting emergency measures and limiting daily activities, Hungary was among the hardest hit countries during the second and third waves, with a cumulative death of 3,148 deaths per 1 million inhabitants until October, 2021 – a trend owed mostly to the weaknesses of the public health system, the lack of a proper contact tracing programme, and the overall poor health of Hungarians.^{iv} Establishing and maintaining public trust in health and governmental institutions in the current crisis also proved to be a challenge, since the Hungarian government pursued an autocratic, pro-vaccine communication that restricted access to pandemic data and threatened independent media with the penal code for publishing independent reports.

In the end, Hungarians' genuine need for fact-based, trustworthy, and diverse reporting on the epidemic was hindered by a centralised governmental propaganda overpromoting the import and use of the Sinopharm and Sputnik V vaccines, compared to the European Union's vaccine rollout. As a result, vaccine-hesitancy remained quite high among Hungarians, with only 66.6% of the population being fully vaccinated by mid-October 2021 which is well below the 74.7% ratio for the EU/EEA area.^v The new information "void" was filled by anti-vax communication found mostly on social media pages much less willing to follow any official rules or regulations, while the Hungarian authorities mostly sidestepped anti-vaxxers communication in their quest to quell the Hungarian regime's real political "enemies," the independent media and the political opposition.

The Hungarian anti-vax community's communication was further strengthened by the fundamental reorganisation of its ranks in the wake of the epidemic. Ynsight Research investigated the arrangement of Hungarian anti-vaccination discourses and groups.^{vi} Their findings suggest that the epidemic has changed both the nature of anti-vaccine groups and the content focus of online conversations. Previously stand-alone, apolitical groups, mainly composed of parents with young children, have been replaced by hyperactive, network-building movements openly promoting new conspiracy theories to influence mainstream communication on vaccination programs, health measures. Their popularity, and expansion over time was also due to the fact that around a quarter of Hungarians believe in conspiracy theories about the pandemic or the fatalities being fake to manipulate people,^{vii} while trust in media (30% trust news overall) or public service media is among the lowest in Hungary,⁴ according to the Reuters Institute's 2021 Digital News Report.^{viii}

⁴ Political Capital's representative poll has also revealed that anti-vaccination attitudes are intertwined with general conspiratorial mentality which would prompt people to disregard official communication about the current crisis and look for fringe sources of information found in anti-vaxxer groups. For more, please see:
https://www.politicalcapital.hu/news.php?article_read=1&article_id=2784

Hypotheses

The anti-establishment attitude of some of the Hungarians expressed towards governmental health measures, economic restrictions have not gone unnoticed among Hungarian political actors in the opposition. Whilst parties of the moderate opposition, such as MSZP, Momentum, DK or Jobbik, primarily attacked the government's sometimes chaotic management of the pandemic or the Hungarian vaccination program's reliance on the Chinese-manufactured Sinopharm and Russian-manufactured Sputnik-V vaccines, the far-right *Mi Hazánk Mozgalom* (Our Homeland Movement) took a much harder stance. The Our Homeland Movement has quickly realised that the anti-vaxxer movement's conspiracy theories are becoming increasingly popular in the Hungarian far-right subculture prone to conspiratorial thinking and it cannot compete with the ruling *Fidesz-KDNP*'s xenophobic rhetoric on traditional far-right issues, such as illegal immigrants or the LGBTQI+-community lately, so it decided to create its own anti-vaccination or vaccine-critical platform in the Hungarian party-politics to stay competitive.

Consequently, we could formulate the following hypotheses about the expansion and radicalization of the Hungarian anti-vaccination scene:

- (1) The initial transformation and radicalization of the new Hungarian anti-vaccination movement was carried out by new antivax "crisis entrepreneurs" who used their health/business background to lend credibility to the movement, expand its ties to the alternative lifestyle-health "expert community," and formulate their disinformation narratives.⁵
- (2) The further radicalization and expansion of the Hungarian anti-vax movement is executed through the pro-Russian and pro-Chinese far-right subculture led by the Our Homeland Movement's calls to protest official health measures.
- (3) The conjoined movements and rhetoric of the Hungarian anti-vax and far-right movements resulted in a more general Eurosceptic and anti-Western rhetoric amplified by the Russian fringe network of pro-Russian media in Hungary and the pro-Eastern narratives of Hungary's pro-government media.
- (4) The messaging of both fringe and mainstream Eurosceptic actors could positively impact the image of foreign authoritarian powers as the vaccination campaign proceeds in 2021.

METHODOLOGY

Our research employed both qualitative and quantitative methodology to monitor and collect historical media data present on Hungarian fringe anti-vax and far right/pro-Kremlin webpages and Facebook pages, groups. The quantitative dataset used in the analysis was generated using the SentiOne social media listening platform, as well as the CrowdTangle software that allowed us to access homepages' and Facebook groups' data to conduct trend, statistical and network analyses of media content production. For more on methodology see please Annex 1.

⁵ Our first assumption could already be verified by other studies mentioned before, and we listed it only to differentiate between the different stages of anti-vax radicalization of Hungary.

A TIMELINE OF THE DEVELOPMENT OF THE HUNGARIAN ANTI-VAX MOVEMENT

To properly understand the Hungarian anti-vax movement's fundamental transformation from a small community of concerned parents to a mass-movement led by "experts" and its possible links to the Hungarian far-right subculture, we reconstructed a short history of events that contributed to the establishment, settlement and expansion of the new movement.

A leader emerges

After the initial shock of the new health crisis and with the state of emergency measures enacted by the Hungarian government taking effect in mid-March, the new Hungarian anti-vax movement caught wind around May 2020. The key actor behind the antivax-push turned out to be Dr György Gődény, a pharmacist by profession, who had considerable experience in setting up new organisational structures to financial ends.⁶ After realising the political, medical and/or financial potential of the antivaxer stance, Dr Gődény established the basic communication structures to successfully channel Hungarian anti-establishment attitudes related to the pandemic into the movement. He founded the clickbait homepage *Médiaforrás* in March, created the Facebook page 'Give us back our normal lives' (Adjátok vissza a normális életünket)^x and the now-banned Facebook group 'People who want a normal life' (Normális élethez ragaszkodók csoportja) in May,^x followed by the establishment of a new party called the Party for Normal Life (Normális Élet Pártja) in June 2020.^{xi} His "normal life" movement also launched at least 27 additional Facebook groups with a total membership of about 100,000 on a county-level, all over Hungary or some even abroad.

Institutionalization and professionalisation of the movement

At the same time, the Hungarian antivax-movement underwent a further institutionalization, and professionalization process, capable of mobilising dozens of domestic or international experts online, and thousands of people online or offline for protests.

A new civic association of "experts" served as the main framework for the institutionalization and professionalization of the antivax subculture. Three former or current health professionals, Dr György Gődény, Pócs Alfréd M.D., then-leader of the Heves county branch of the Hungarian Chamber of Doctors (MOK), a trained orthopaedic and traumatology specialist and a local member of the City council of Eger, and Tamasi József M.D., a former internal medicine physician turned into Ayurvedic healer founded the *Orvosok a Tisztánlátásért* (Doctors for Clarity) Association.^{xii} Their ranks were quickly joined by five other professionals of whom four have medical training and one has a diploma in forensic psychology. Despite their medical degrees, the common denominator of these "experts" has been their evident lack of expertise in epidemiology, an inclination to conspiratorial

⁶ He founded, for example, a fake party called "Common Denominator" (Közös Nevező) during the 2018 general elections to access public campaign funds worth of HUF 153 million (EUR 425,000) possibly utilising bogus voter registration data. In the same fashion, he started organising the Hungarian anti-vax scene. For more, please see: https://k.blog.hu/2020/05/29/kovetkezmenyek_nelkul_a_nav_egyetlen_fillert_sem_hajtott_be_a_2018-as_kamupartoktol

thinking and shared interests in different alternative therapies, health businesses competing with mainstream health services – especially in the current crisis.

As a second step of professionalisation, the Doctors for Clarity has organised two “Scientific COVID Conferences” in Budapest to present their alternative “expertise,” embed the Hungarian movement into a network of international anti-vaxxer “experts,” and spread unscientific beliefs about the epidemic. For example, the first event’s agenda featured two Russian health professionals, alongside German conspiracy theorists:^{7 8} Dr Igor Alexeyevich Gundarov, allegedly a member of the Russian Academy of Sciences, and Dr Alina Aleksandrovna Lusavina, President of the Alliance of Independent Russian Doctors.^{xiii} The second conference held in August 2021⁹ featured prominent German and U.S. anti-vaxxers, including top American conspiracy theorist Robert F. Kennedy who sent a dedicated video message for the Hungarian audience.^{xiv}

Protests and petitions

The institutionalization and professionalization of the Hungarian movement was accompanied by a steady flow of offline events, lectures in cities all around the country that mobilised everyday Hungarians. Dr Gődény, Pócs M.D. and Tamasi M.D. started a petition back in May 2020 to “Abolish the obligation to wear a mask”, signed by over 20.000 Hungarians.^{xv} **Dr Gődény organized a so-called “COVID 9.11” protest in early September.^{xvi} Held in front of the U.S. Embassy in Budapest, the demonstration, which attracted an estimated 1,000 people, was pushing for a narrative saying that the pandemic is “just as much fake” as the 911 bombings were, thereby making the case for anti-Western conspiracy theories.** In 2021, he held another three anti-lockdown demonstrations in February,^{xvii} March^{xviii} and June.^{xix}

Financial interests behind the antivax-movement

The financial interests of the founders and leaders of the Hungarian movement were on display right from the start. Among the eight members of the Doctors for Clarity, six are involved in some form of alternative medicine, offering alternative therapies or some form of remedies for the COVID-19 infection or the long COVID. Dr György Gődény was indicated in an investigation launched by the Economic Competition Office (Gazdasági Versenyhivatal) against Nutriversum Ltd., a manufacturer of dietary supplements, whose products were promoted by Dr Gődény in relation to the COVID-19 epidemic on the company’s YouTube channel.^{xx xxi} As a prominent member of the Doctors for Clarity Gábor Lenkei M.D. is a well-known figure of the Hungarian Scientology community, he made a fortune off of his vitamin-business based on the premise that official medicine is ruled by a “drug mafia” trying to prevent people from accessing the best alternative medicines and treatments.^{xxii}

⁷ ‘Ez a német orvos hamis információkat terjeszt a COVID-19-ről’ | AFP, accessed 20 September 2021, <https://tenykerdes.afp.com/ez-nemet-orvos-hamis-informaciokat-terjeszt-covid-19-rol>

⁸ ‘Dr. Ulrich Kramer egyike azoknak az orvosoknak (...)', Facebook, accessed 20 September 2021, <https://www.facebook.com/DoktorGodeny/posts/2598938610365450/>

⁹ ‘A Magyarok Világkongresszusa keretén belül 2. tudományos COVID konferencia’, Orvosok és Egészségügyi Dolgozók a Tisztánlátásért, 18 August 2021, <https://orvosokatisztanlatasert.hu/2-tudomanyos-covid-konferencia/>

The G7 portal estimated that the virus-sceptical views, alternative medicines promoted to and through the new anti-vax community meant billions in new revenues for these alternative practitioners of medicines. The revenues of the health group of companies controlled by Lenkei M.D. has risen by 60% to HUF 3.5 billion in 2020, while the same number for Nutrivsum Ltd. promoted by Dr Gődény has risen from HUF 600 million to 1.77 billion in the same year.^{xxiii} Thus, being an anti-vaxer businessman or health provider proved to be a lucrative business opportunity in Hungary in the course of the epidemic despite social media companies' (YouTube, Facebook) and Hungarian authorities' quite late ban or sanctioning of these experts, their products or services. The profit generating capability of the movement is provided by the central organisation of the Doctors for Clarity Association, since its homepage header directly links to the leaders' personal homepages, namely, the tamasidr.hu, doktorgodeny.hu, and drlenkei.org to swiftly connect the anti-vax demand side with the supply side of alternative health services or "medicines."

Backlash against the movement

Despite the anti-vaxer movement's online and offline hyperactivity, their fearmongering and disregard for public safety measures, the Hungarian authorities were quite slow in their reaction to vaccine-sceptic communication. The first public medical institution to take notice and subsequent concern of anti-vaccination health experts and their dangerous views was the independently run Hungarian Chamber of Doctors (MOK), which sanctioned the founder of the Doctors for Clarity Alfréd Pócs M.D. by suspending his membership in the organisation and barring him from practicing medicine for six months.^{xxiv} In return, the Doctors for Clarity has initiated a petition to restore Pócs' status and licence.^{xxv}

The first statement from the government denouncing the movement publicly came on October 30, 2021,^{xxvi} almost half a year after Gődény and his fellow experts started spreading dubious messages about the pandemic. Nonetheless, Hungarian police eventually launched an investigation into Gődény's activities for the massive spreading of health-related disinformation in December,^{xxvii} which resulted in a two-years prison sentence suspended for two years - a decision still pending in front of the court in September 2021.^{xxviii} Gődény was also fined by police after he held an anti-lockdown demonstration in March this year.^{xxix} Social media pages were similarly slow in their reaction to the movement's harmful online activities. Facebook banned Dr Gődény's main group used for mobilisation, the People who want a normal life (Normális élethez ragaszkodók csoportja) and Gábor Lenkei's Facebook page only in September 2020, while all the other fake experts and movement groups could carry on their social media activity uninterrupted.^{xxx} Google banned Dr Gődény's YouTube channel belatedly in September 2021 for good.^{xxxi}

THE RADICALIZATION OF THE HUNGARIAN ANTIVAX MOVEMENT

As stated in the section on our hypotheses, we expected the further radicalization of the new Hungarian anti-vax movement to be executed through and with the help of the Hungarian far-right subculture and actors.

A qualitative analysis of antivax media strategies

If we look at disinformation narratives from a qualitative perspective, it becomes quite evident that the overlap between the narratives of the novel Hungarian anti-vax movement and the far-right Our Homeland Movement is part of a strategic communication on behalf of these actors.

The first phase of narrative radicalization was clearly carried out by the Hungarian far-right milieu at the beginning of 2020, when the reorganisation of the antivax movement had not started yet. Two of the most significant far-right and pro-Kremlin fringe media, *Nemzeti.net*^{xxxii} and *A világ titkai*,^{xxxiii} almost immediately accused the Bill and Melinda Gates Foundation of orchestrating the new pandemic to sell their new vaccines developed by a biotechnology firm owned by the US tech billionaire. *A világ titkai*, along with a smaller pro-Russian homepage, *Bal-Rad*, claimed that the novel coronavirus was a man-made pathogen released by the Western elites and/or the United States as part of the “Agenda 21 Protocol” to prevent the global rise of China,^{xxxiv} “annihilate its population and cripple its entire economy.”^{xxxv}

Given the size, scale and long history of the Hungarian far-right subculture made up of a variety of cultural associations, paramilitary organisation, and parties, it is not a coincidence that the leaders of the antivax-movement tried right from the start to reach out to the conspiracy-prone far-right audience. Most importantly, the both “scientific conferences” organised by the Doctors for Clarity was hosted by the World Federation of Hungarians (Magyarok Világszövetsége, MVSZ) a once mainstream organisation of Hungarians living abroad turned far-right outlet, in the MVSZ headquarter in Budapest. The second Budapest COVID Conference was even organised on the third and fourth day of the 10th World Congress of Hungarians between 15 and 20 August 2021 hosted by the MVSZ.^{xxxvi}

The far-right scenery, most notably the far-right Our Homeland Movement jumped quite late on the antivax bandwagon and, for a time, tried to channel the antivax-movement into his own. The move started out with echoing some of the antivax narratives and arguments. The leader of the Our Homeland Movement László Toroczkai published a video on his YouTube channel about how the new pandemic was orchestrated by “Western businessmen” and the “Communist China” to bring about a “new world order” supported by the Bilderberg Group.^{xxxvii} Alongside the antivax-mobilisations and demonstrations, far-right politicians of the Our Homeland Movement organised two anti-vaccination and lockdown demonstrations March^{xxxviii} and September 2021.^{xxxix} **In March, however, Dr Gődény accused the party of inviting antivax-supporters to the party’s protest for “political profiteering,” while shunning the antivax movement’s own events and communication.** Therefore, Dr Gődény asked members of his movement not to join forces with the Our Homeland movement,^{xl} since it voted for the authorisation bill introduced by the Hungarian

government to control the new epidemic back in March 2020.¹⁰ **The conflict between the two sides became even more personal, when the party's online magazine *Magyar Jelen* (Hungarian Present) published an anti-Semitic article about Dr Gődény, accusing him of being a "slick manipulator who often brags about his Jewishness,"** who founded his new anti-vax party to gain access to millions in campaign funds without a "strong political vision or vocation" to stand up against pointless government-mandated lockdowns.^{xli}

As a result, the Our Homeland Movement continues to adopt disinformation narratives from the anti-vax movement, however, they deliberately try to carve out an independent anti-establishment platform on the COVID-19 crisis. **In September 2021, the party has launched "the largest billboard campaign in its history" against the compulsory use of Covid vaccinations on adults or children, directly attacking the Hungarian government and PM Viktor Orbán.**^{xlii}

Consequently, the organisational links between the Hungarian anti-vax and far-right communities are still there, however, the open competition between Dr Gődény's movement/party and the Our Homeland Movement for the anti-COVID Hungarian audience, electorate means that the cooperation between the leaders and the hardcore members of these movements is rather on shaky grounds. The analysis of quantitative data will reveal to which extent the two movement's communication, in fact, overlap and radicalize each-other beyond the organisational relations.

A quantitative analysis of antivax communication

Trendlines of (dis)information narratives

Mainstream narratives

Ever since the start of the COVID-19 pandemic in Europe in January 2020, mainstream media has played a uniquely important role in shaping the public conversation around the novel coronavirus outbreak, the management of the public health and corresponding economic crisis, as well as the vaccination development and rollout. The examination period between January 1 and June 1, 2020, produced more than 2,166,000 mentions of the outbreak with peaks occurring in accordance with the different waves of the pandemic. Hungary's mainstream media outlets are in a unique position, as most of them is either directly or indirect controlled by the Hungarian government, which makes most of the news production quite uniform and propagandistic following the guidance and interests of the Fidesz-KDNP coalition. In contrast, the sphere for independent media has gradually decreased since Fidesz rose to power in 2010. As evidenced by narratives that evolved during the first wave of the pandemic, a considerable share of mainstream media outlets covered the outbreak and the crisis management in line with their assumed political affiliation. While most independent media outlets focused on informing the general public about news about the pandemic and providing them with essential updates given the

¹⁰ The friction between the fringe movements was also highlighted by a video in which László Toroczkai talked with Drs József Tamasi M.D. and Alfréd Pócs M.D. about the negative effects of governmental restrictions, however the Doctors for Clarity demanded the Our Homeland Movement to remove it from YouTube, since it was cut to "serve the party's interests," mainly focusing only on the economic restrictions put forward by governmental measures, instead of the general interests of the Hungarian people - represented in their view better by the antivax community.

appearance of a new virus, pro-government media outlets quickly ran to politicize the outbreak by putting the blame on the Hungarian opposition as the early pandemic situation was spinning out of control last April.

According to our research, there were two well distinguishable lines of communications when it comes to the pandemic and vaccination issue, largely depending on the (potential) political affiliation of the given media outlet. In accordance with their coverage on the pandemic,^{xliii} in general, the examination period saw independent media outlets focusing their coverage on providing accurate news briefs and much needed updates about vaccine candidates from companies that struck a supply deal with the European Union. A significant part of this narrative was a simultaneous coverage about the deterioration of the pandemic situation as coronavirus cases were gradually on the rise during the first wave in March-April 2020 and as COVID-19 cases and deaths were on the rise between October and December. With news websites and social media discourse first peaking in April 2020 (with close to 9,000 relevant posts per week) seen on the graph below, the first significant mainstream coverage evolved around crisis management efforts from the government and the opposition-led Budapest, with pro-government outlets attempting to put the blame on the opposition for the high number of deaths occurring in an elderly care centre in the capital. This was followed by another peak in November 2020 (second coronavirus wave, relevant posts averaging 5,000), this also included coverage about Katalin Karikó, a Hungarian-born US biochemist and the Vice President of BioNTech, who was instrumental in delivering the mRNA vaccine technology and the Pfizer/BioNTech vaccine for mass inoculation. Both pro-government and independent social media embraced the Hungarian-born scientist and her role in tackling the pandemic.

Similar to the case of crisis management during the first wave, the pandemic was further politicized when the Hungarian government first floated the idea of purchasing the Russian-developed Sputnik V vaccine, as well as further vaccinations from China in November 2020. News concerning the mass application of non-EU vaccines led to frustration over vaccine efficacy and safety among the public with a potential to increase vaccine hesitancy,^{xliv} primarily due to Russia’s Sputnik V since the vaccine lacked critical data and was approved and encouraged by the government as part of a controversial purchase involving businesses close to the government with no experience in the field.

The weekly number of relevant Facebook posts/articles dealing with the coronavirus in mainstream media between 1 January 2020 and May 31, 2021



Source: Own calculations based on SentiOne data.

Recorded in January 2021, the second peak of the media discourse was dominated by a newly born pro-government disinformation narrative, accusing Hungarian opposition parties, which have criticized the Eastern purchases, of being anti-vaccination. The term “anti-vax left” went viral among pro-government politicians and media outlets,^{xlv} leading to the evolution of a disinformation narrative despite the fact that all major opposition parties considered vaccines the only way out of the pandemic and advocated for transparent vaccine procurement, with some of them, indeed, criticizing the use of Russian and Chinese jabs.

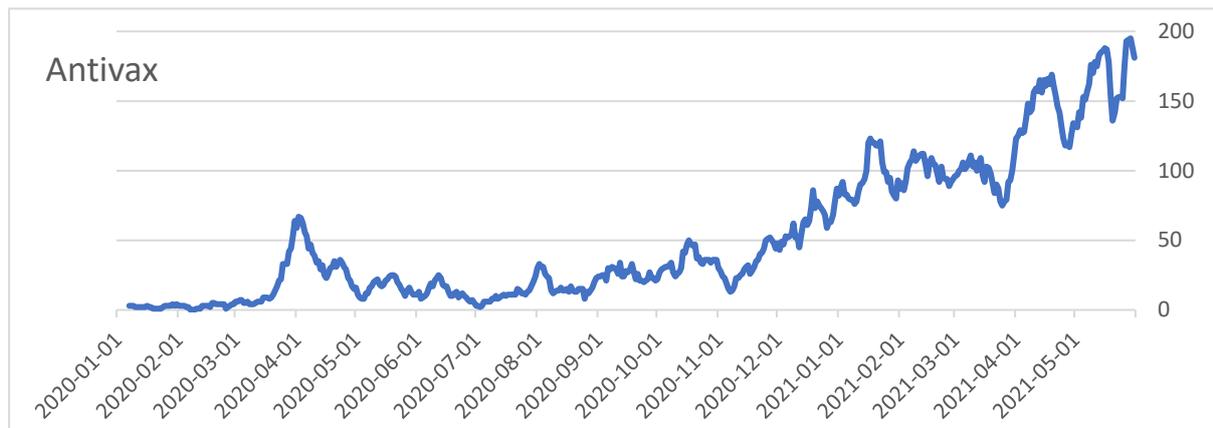
After the Russia’s Sputnik V and China’s Sinopharm vaccines were approved by the Hungarian public health authorities, the first three months of 2021 - the early phase of the vaccination rollout - gave room^{lxi} to a new narrative created and adopted by the pro-government sphere, that is, Hungary being at the top of the EU vaccination ranking.^{xlvi} As shown by the third peak of discourse (January-March, relevant posts averaging: 6,000), this line of communications was adopted primarily as a counter-narrative to the news of Hungary leading the global COVID-19 death toll rate during the third wave.^{xlvii} The use of Eastern vaccines, especially high-volume deliveries from China, allowed the government to claim the first place among EU member states, however, efficacy concerns largely stayed for the time, and remained a part of independent mainstream coverage.

Regarding media discussions in the mainstream, our examination confirms the enormous role social media can play in pandemic-related information, as well as disinformation on health. Facebook was the predominant source of information about the pandemic, the crisis management measures and the vaccination rollout, followed by independent media outlets such as *hvg.hu* and *444.hu*, as well as by pro-government ones such as *pestisracok.hu*. Concerning the examination period, both political figures and media outlets were essential in shaping the political discourse on the pandemic when it comes to the top authors. On the political front, Budapest’s opposition mayor Gergely Karácsony quickly emerged as the top author on Facebook with the highest number of shares. In terms of overall activities, *hvg.hu* emerged on the top. Similarly important was the Hungarian government’s own Facebook page (‘Magyarország Kormánya’) that - using a pandemic-dedicated website called *koronavirus.gov.hu* and a corresponding Facebook page (‘Koronavírus Tájékoztató Oldal’) was the top source for the vaccination rollout, ending up being the most commented Facebook page.

Anti-vax narratives

The COVID-19 pandemic has resulted in an unprecedented amount of disinformation flooding the public discourse and the largest ever health-related disinformation wave in the media. The rapidly concluded vaccine research, combined with scepticism about the effects of the coronavirus and criticism towards the government for its failure to address the economic and social impacts of the pandemic, among other factors, gradually allowed the previously insignificant anti-vaccination communities to shine. These operated almost uninterruptedly even as the recognition of the anti-vax notion as a threat to the country’s public health has become more obvious within mainstream media.^{xlviii}

The weekly number of Facebook posts/articles dealing with the coronavirus in anti-vax fringe media between 1 January 2020 and May 31, 2021



Source: Own calculations based on SentiOne data.

As data from the past months suggests, narratives created by the anti-vaccination actors were pushed through social media in response to the different COVID-19 waves. Interestingly but not surprisingly, narratives developed and promoted by the anti-vax community were preceded by a strong COVID-19-skeptic discourse as shown during the first peak of social media discourse last April of 2020. At the time, anti-vaccination groups were pushing messages with the aim of downgrading the health impacts caused by the coronavirus, as well as of criticizing lockdown restrictions that were adopted by the government. **Ironically among others, alternate health influencer and medicines businessman Gábor Lenkei said he could “lie in a bath full of coronavirus and nothing would happen.”** In a series of Youtube videos, another health influencer and the campaign figure of a vitamin business György Gődény gave dubious advice^[2] on which nutritional supplementary vitamins should be used to stay healthy. The first truly vaccine-focused narrative of theirs came in October 2020 as the second coronavirus wave was quickly spreading through Hungary and led to lockdown restrictions once again. Occurring simultaneously with promising news about vaccine development by companies such as Pfizer, Moderna and AstraZeneca, among others, **the first line of communications can be described as the narrative of scepticism about whether a vaccine is needed at all and the alleged health implications.** Accordingly, **the narrative described the upcoming mass vaccination as a major experiment on humans that was also fuelled by uncertainties related to both Western- and Eastern-produced jabs,** with the former group being under constant pressure from disinformation detailing unconfirmed deaths and the latter being subject to criticism over the lack of proper approval procedure. This included^[3] posts about Sucharit Bhakdi,^{xlix} a German COVID-19-denier virologist who described mRNA vaccines as dangerous.

According to our examination, the media discourse involving anti-vaccination groups and their messages accelerated rapidly between November 2020 and January, likely as a result of the EU's stepped-up measures to finally start the vaccination rollout and the Hungarian government's outreach to China and Russia in order to purchase vaccines. The first peak of anti-vax social media discourse of 2021 came in January. Unconfirmed reports of vaccine-related fatalities were regularly picked up by anti-vax social media groups. Such an article appeared on the 100,000+ followers-strong Facebook page of György Gődény who claimed without evidence that 23 people died due to receiving the Pfizer vaccine in Norway.¹ The past three months in the run into the third wave of the pandemic saw an even higher volume of anti-vax messages, with two interconnected narratives shaping the discourse at

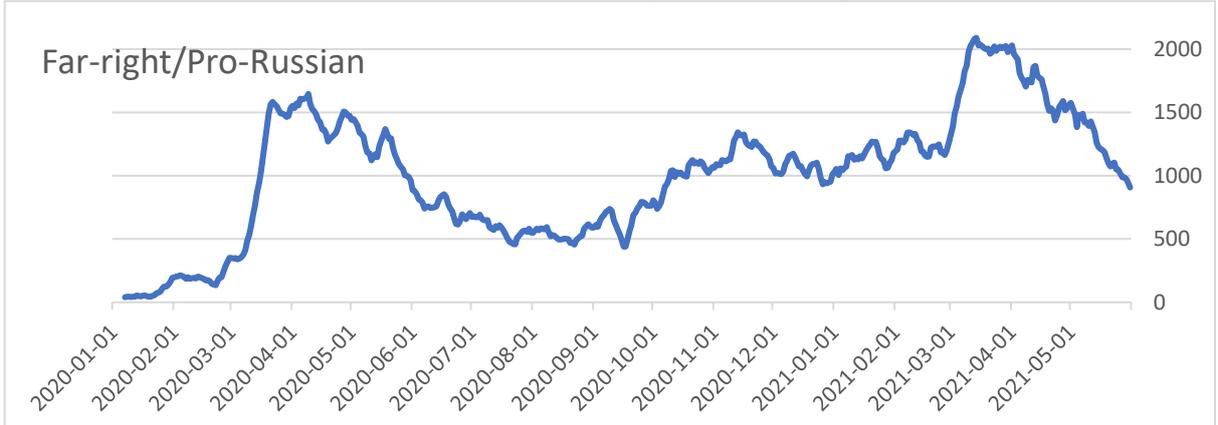
the time: opponents of the COVID-19 vaccine saw both the inoculation and the lockdown restrictions as abuses of their human rights,ⁱⁱ while fears have grown that the coronavirus vaccine will be made compulsory in an unlawful way, despite repeated confirmations from the government and health authorities that it will not.

Far right/pro-Russian narratives

Pro-Russian media and social media pages, as well as far-right and conspiracy theory page with a pro-Kremlin foreign policy orientation were genuinely active in discussing the interconnections of the pandemic and politics from a radical, right-wing perspective. **Their website and social media coverage picked up significantly as the first coronavirus wave hit Hungary last spring, with messages focusing on Russian mask diplomacy and conspiracy theories about the origins of the virus being just as prevalent at the time.** During the examination period, A total of 73,783 mentions of the pandemic and vaccinations were registered, with coverage peaking in March-April 2020 (1,500), November 2020 (close to 1,300) and March 2021 (above 2,000). **These coincided with a strong anti-EU narrative, looking to blame “Brussels” over the mishandling of the pandemic, exploring the allegedly failed crisis management of Western European countries and, oftentimes, praising the Hungarian government.**

Similar to their level of activity during the first wave, the coronavirus coverage of far-right and pro-Kremlin portals showed a corresponding peak in November 2020, in the middle of the second COVID-19 wave. Certain portals with such an ideological leaning adopted and maintained a pro-government narrative on the crisis management, praising the allegedly prompt nature of the lockdown restrictions and the economic measures undertaken. Ultimately as the third wave proved detrimental for Hungary in terms of COVID-19-related fatalities, the highest peak of media discourse was recorded during March 2021 when government-leaning portals pushed the mainstream narrative of “Europe’s fastest vaccination rollout”, while certain fringe portals with pro-Russian attitudes continued fuelling unsubstantiated allegations surrounding the virus itself.

The weekly number of Facebook posts/articles dealing with the coronavirus in far right/pro-Russian media between 1 January 2020 and May 31, 2021



Source: Own calculations based on SentiOne data.

Considering far-right and pro-Russian sources, *nemzeti.net*, a far-right news portal and landing page for websites with a similar ideology was the most active in discussing the pandemic. Following as a distant second, the neo-Nazi news portal *kuruc.info* also emerged among the top sources, while conspiracy theory portals such as *Kimondott Igazságok* (Outspoken Truths) and *Világfigyelő* (World Observer) were also among the predominant

sources. While far-right and pro-Russian portals have had a tendency for combining accurate reports with truth, conspiracy theory pages with a pro-Kremlin affiliation continued to focus on dubious claims about both the virus and the vaccines. Among the sources driving the narrative of a successful governmental handling of the pandemic was 'Számok - A baloldali álhírek ellenszere' (Numbers - The Cure for Leftist Fake News), a government mouthpiece Facebook page that frequently uses Russian state media sources for spreading political messages in favour of the government.^{lii} The aforementioned pro-government Facebook page was the leading one^[17] in pushing the disinformation narrative of the "anti-vax left" about the Hungarian opposition.

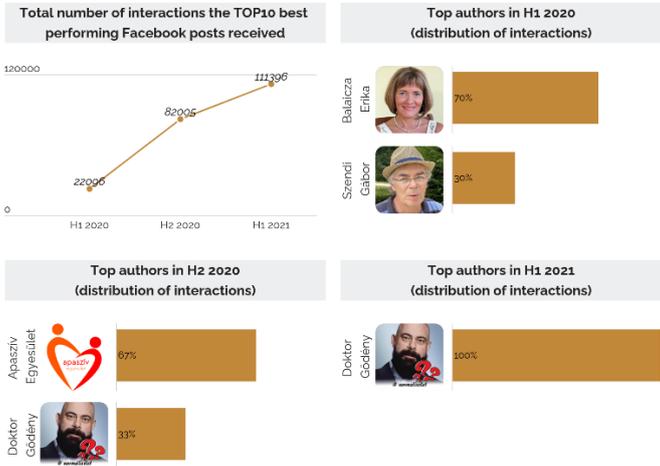
Top performing Facebook posts

Beyond the evolution of fringe disinformation trends and interactions, we measured the "radicalization" of discourses by examining and comparing the top performing Facebook posts published by anti-vax or far right/pro-Kremlin sources during the first, second or third 6-months period of our investigation. Moreover, we tagged all messages produced by our fringe sources for two two-week period between 15 and 29 February 2020, as well as 18 May and 1 June 2021 to compare how specific disinformation narratives produced either by the far-right or anti-vax media evolved, succeeded and compared to each-other.

Status quo and generational change

If we have a look at the top performing 10 posts produced by anti-vax sources on our list (see Figure 1 below), it is evident that the radicalization of the antivax movement was underpinned by a generational change. Whereas, the top posts in early 2020 were produced by rather marginal experts or groups, such as naturopathic doctor Erika Balaicza M.D, the Hungarian prophet of the palaeolithic diet Gábor Szendi and the Vaccine Critics Life Protection Association focusing on the dangers of childhood vaccinations, Gődény's Facebook page, along with new antivax media (Awakening, Father Heart Association, Freedom Movement, Antivirus, Phytomint Health Magazin) started to dominate the anti-vax discourse from the second half of 2020 - right when the new organisational infrastructure was set up by the Doctors for Clarity.

Figure 1. Key metrics of the ten best performing Facebook posts on the anti-vax media list (interactions = total number of shares, comments and all types of reactions)



Source: Own calculations based on SentiOne data. [Click here](#) to view this figure online.

The most successful post based on the total number of interactions of the second half of 2020 proved to be a video (see Table 1 below) published by the 'Apaszív Egyesület' (Father Heart Association) about "the well-known risks of the mRNA-vaccines,"^{liii} as told by retired Thai-German microbiologist Sucharit Bhakdi, a conspiracy-theorist, numbering 28228 reactions.^{liv} Dr. Gődény's top post in 2021 was also a video quoting the former MP of the state parliament of Baden-Württemberg Heinrich Fiechtner M.D. about the "vaccines causing death," the non-existent COVID-19 patients in the German hospitals that generated 15348 reactions in 2021.^{lv}

Table 1. Top 10 best performing Facebook posts on the anti-vax media list (interactions = total number of shares, comments and all types of reactions)

2020 H1			2020 H2			2021 H1		
Author	Date	Interactions	Author	Date	Interactions	Author	Date	Interactions
Balaicza Erika dr	20/03	7,789	Apaszív Egyesület	14/12	28,228	Doktor Gődény	19/01	15,348
Balaicza Erika dr	11/03	3,383	Apaszív Egyesület	18/11	11,766	Doktor Gődény	18/02	13,691
Szendi Gábor	20/04	2,599	Doktor Gődény	31/12	7,335	Doktor Gődény	05/03	11,871
Balaicza Erika dr	02/04	1,782	Apaszív Egyesület	24/12	6,527	Doktor Gődény	04/03	11,186
Szendi Gábor	05/05	1,759	Doktor Gődény	27/12	5,184	Doktor Gődény	28/01	11,033
Szendi Gábor	07/04	1,418	Doktor Gődény	27/12	4,969	Doktor Gődény	14/01	10,362
Balaicza Erika dr	15/03	894	Doktor Gődény	29/12	4,894	Doktor Gődény	05/04	9,564
Szendi Gábor	01/04	890	Doktor Gődény	26/12	4,571	Doktor Gődény	05/04	9,485
Balaicza Erika dr	06/04	807	Apaszív Egyesület	09/12	4,497	Doktor Gődény	22/02	9,476
Balaicza Erika dr	31/03	775	Apaszív Egyesület	25/09	4,034	Doktor Gődény	13/03	9,380

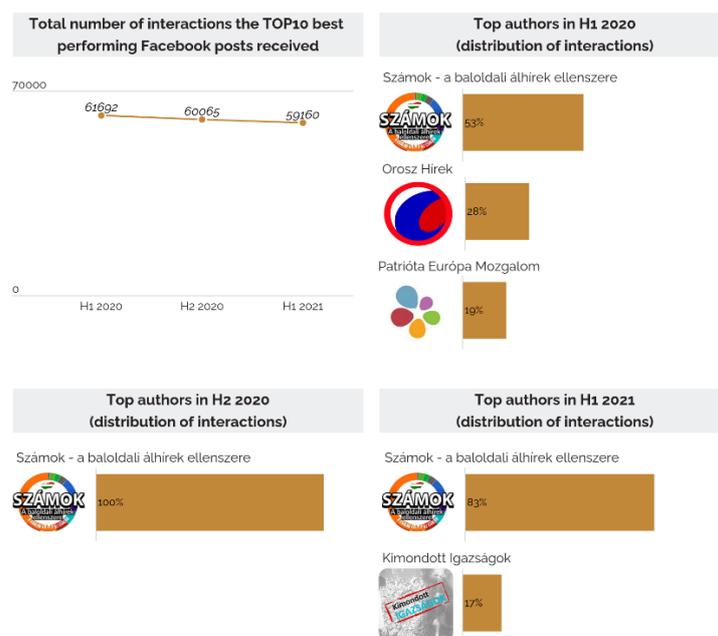
Source: Own calculations based on SentiOne data.

The "generational shift" accompanied by dozens of newly established new or social antivax media outlets of the anti-vax media scenery also meant a significant change in the average number of interactions/posts based on the top 10 messages' performance. In the first half of 2020, the top 10 anti-vax posts produced only 2,210 interactions/posts, whereas the same number rose to 8,200 in the second half of 2020, and 11,140 in the first half of 2021. The steady rise of the average interactions corresponded with the reorganisation of the movement, now dominated by the Doctors for Clarity clique capable of mobilising more than a 100.000-strong audience online and thousands on the streets.

The analysis of the top far-right and pro-Kremlin media's anti-vax posts revealed that the far-right media is dominated by a fairly constant set of pages or a status quo hierarchy (see Figure 2 and Table 2 below), which produced a lower number of total interactions in the periods under review, compared to the anti-vax sources. The top posts are mostly produced by two pro-Kremlin mouthpieces, 'Orosz Hírek' (Russian News) and the Eurosceptic 'Patrióta

Európa Mozgalom' (Patriotic Europe Movement), and the Hungarian government's unofficial propaganda page 'Számok - a baloldali álhírek ellenszere' (Numbers - the antidote to left-wing fake-news).¹¹ Accordingly, Russian News' top post in the first half of 2020 propagated the Russian "humanitarian aid" provided for Northern Italy.

Figure2. Key metrics of the ten best performing Facebook posts on the anti-vax media list (interactions = total number of shares, comments and all types of reactions)



Source: Own calculations based on SentiOne data. [Click here](#) to view this figure online.

Table 2. Top 10 best performing Facebook posts on the far-right / pro-Kremlin media list (interactions = total number of shares, comments and all types of reactions)

2020 H1			2020 H2			2021 H1		
Author*	Date	Interactions	Author*	Date	Interactions	Author*	Date	Interactions
Orosz Hírek	25/03	17,503	Számok...	16/09	9,272	Kimondott Igazságok	26/04	9,820
Számok...	26/06	6,934	Számok...	20/07	7,446	Számok...	29/04	7,407
Patrióta...	23/03	6,581	Számok...	03/11	6,995	Számok...	28/02	6,969
Számok...	17/03	5,508	Számok...	19/11	6,570	Számok...	21/04	5,395
Patrióta...	28/03	5,194	Számok...	30/10	5,453	Számok...	02/03	5,222
Számok...	14/04	4,193	Számok...	12/11	5,360	Számok...	30/03	5,145
Számok...	19/06	4,160	Számok...	12/12	5,101	Számok...	18/04	4,984

¹¹ Although we cannot prove the Hungarian government direct involvement in setting-up a set of pro-government network of social media pages, this so called „grey zone“ network of pages, represented by Numbers - the antidote to left-wing fake-news in our sample, produces and follows pro-government communication in an unusually uniform, coordinated and frequent manner, which requires significant resources and cannot be a coincidence given the ruling Fidesz-KDNP's official media conglomerate made up of more than 500 titles.

2020 H1			2020 H2			2021 H1		
Author*	Date	Interactions	Author*	Date	Interactions	Author*	Date	Interactions
Számok...	20/03	4,022	Számok...	10/12	4,814	Számok...	16/03	4,855
Számok...	25/03	3,908	Számok...	17/09	4,767	Számok...	20/01	4,724
Számok...	23/06	3,689	Számok...	10/11	4,287	Számok...	16/02	4,639

* Számok... = Számok - a baloldali álhírek ellenszere; Patrióta... = Patrióta Európa Mozgalom

Source: Own calculations based on SentiOne data.

If we divide our far-right list of top posts into two groups, one containing pages with the highest number of fans, another containing only pages with the number of fans below 20,000, the pro-Kremlin profile of the anti-vax discourse comes to the forefront (see Table 3 below).¹² This second group of pages revealed that the top 10 antivax posts of the first half of 2021 were produced by such prolific pro-Kremlin media, as 'Moszkvater.com' operated by a pro-Kremlin journalist Gábor Stier or 'Vlagyimir Vlagyimirovics Putyin Hivatalos Magyarországi Oldala' (Vladimir Vladimirovich Putin's Official Hungary Website),^{lvi} both propagating the success of the Sputnik V vaccine diplomacy in Hungary or in the West.^{lvii}

Table 3. Top 10 best performing Facebook posts in the first half of 2021, on the far-right / pro-Kremlin media list (showing pages that have less than 20,000 fans. Interactions = total number of shares, comments and all types of reactions.)

anti-vax			far-right / pro-Kremlin		
Author*	Date	Interactions	Author*	Date	Interactions
Ébredés	24/03	9,104	Felhőborító Hírek	14/03	132
Apaszív Egyesület	11/04	2,169	Alternatív Hírek	11/03	87
Szabadság Mozgalom	18/03	1,961	moszkvater.com	28/02	80
Szabadság Mozgalom	14/01	1,774	Alternatív Hírek	05/03	74
Vírusmentesítés	10/05	1,256	Vlagyimir Vlagyimirovics...	08/01	73
Phytomint Egészség Magazin	14/03	1,136	moszkvater.com	09/02	70
Ébredés	30/04	1,063	moszkvater.com	04/01	66
Oltáskritikus Életvédők...	31/01	996	moszkvater.com	24/02	62
Ébredés	25/05	738	moszkvater.com	23/01	57
Ébredés	04/01	732	Alternatív Hírek	11/04	56

* Oltáskritikus Életvédők... = Oltáskritikus Életvédők Szövetsége - Vaccine Critics Life Protection Assoc.; Vlagyimir Vlagyimirovics... = Vlagyimir Vlagyimirovics Putyin Hivatalos Magyarországi Oldala

Source: Own calculations based on SentiOne data.

¹² We divided media on our anti-vax and far right/pro-Kremlin lists into two sub-groups to check whether the size of pages in terms of their audience, frequency of content production distorts or hides the pattern of top posts' production. Still, our results remained quite similar in both groups, reinforcing our main conclusions.

The top far-right/pro-Kremlin posts average interactions/posts are lower than antivax-lists' top posts' performance,¹³ which is a testament to the unbelievable success of the new Hungarian anti-vax movement, capable of amassing and mobilising a hyperactive online community and audience in a matter of months - compared to the years-long effort of the far right/pro-Kremlin fringe media to build a social base.

The examination of all the top 10 mainstream posts revealed that, regardless of the pages' size below or above 20,000 fans, the pro-government fringe media dominated the top of the mainstream anti-vax discourse, which is not really a surprise given the sheer number of pro-government private or state-owned outlets and the government's monopoly over the official COVID-19 data and information throughout the crisis.

Narratives of geopolitics, conspiracy and activism

In order to detect the evolution and radicalization of fringe narratives, we tagged all the relevant articles or Facebook posts produced by any fringe media on our anti-vax and far right/pro-Kremlin lists between 15 and 29 February 2020, as well as between 18 May and 1 June 2021. The tier tag system of classification developed and described in more detail in the methodology section allowed us to categorise each message according to geopolitical orientation, the presence of disinformation and online or offline activism.¹⁴ We reviewed altogether 2,771 articles for the two periods of which 319 pieces received at least one tag.

Our analysis revealed that the antivax fringe media was the one that transformed the most in terms of the number of messages and their extremist rhetoric. Whereas antivax media on our list produced only 8 articles or posts in the period between 15 and 29 February 2020, of which only one contained a disinformation narrative about Bill Gates' alleged role in the epidemic,^{lviii} the same media published 343 articles or posts between 18 May and 1 June 2021, and 209 or 61% received tags of those (see Table 4 and Figure 3 below). The number of messages produced by the far right/pro-Kremlin media about the pandemic increased only fourfold from 462 to 1,958 for the same periods, while the ratio of tagged articles of posts reached a mere 5% of all messages produced in 2021.

¹³ On average, the far right/pro-Kremlin media's top posts generated 6,169 average interactions/post for the first half, 6,000 for the second half of 2020, and 5916 average interactions/post for the first half of 2021.

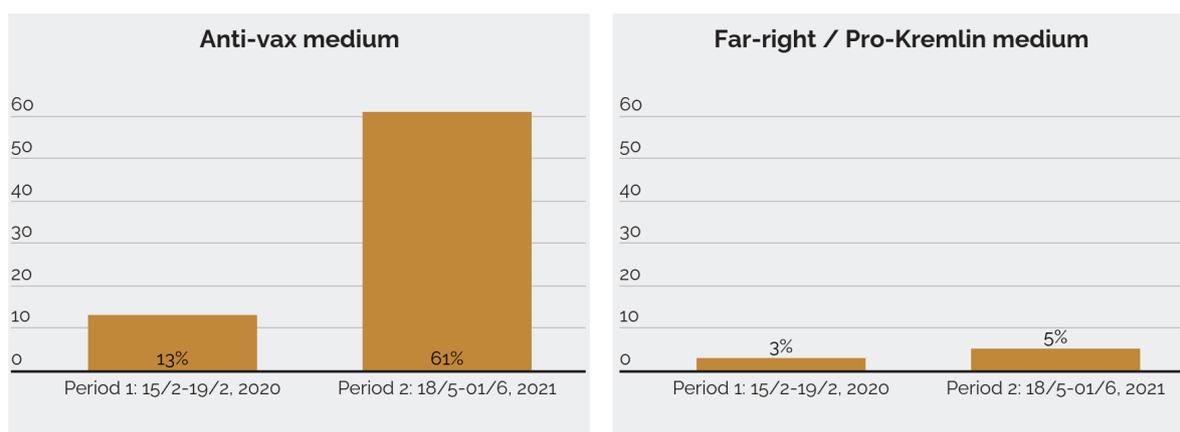
¹⁴Therefore, messages received a geopolitical tag if they voiced any pro-Eastern or anti-Western political statements, a conspiracy tag if they referred to some specified types or just any disinformation narratives about the pandemic, finally, an activism tag if they called for any critique, boycott, online or offline protest, violent attack against any health measure or vaccination program. The three categories of classification could be applied simultaneously for each article or post under consideration.

Table 4. The number of tagged results in antivax and far right/pro-Kremlin communication

	anti-vax		far-right / pro-Kremlin	
	number of items	of which tagged	number of items	of which tagged
Period 1: 15/2-19/2, 2020	8	1	462	13
Period 2: 18/5-01/6, 2021	343	209	1,958	96

Source: Own calculations based on SentiOne data.

Figure 3. The ratio of tagged articles in the antivax and far right/pro-Kremlin discourses



Source: Own calculations based on SentiOne data. [Click here](#) to view this figure online.

The expansion and radicalization of the antivax discourse was reflected in the change of sources, as well as disinformation narratives. In 2021, the discourse was mostly dominated by the new expert forum Doctors for Clarity. As seen on Table 5 below, the top five antivax disinformation sources included the 'Ébredés' (Awakening), a far-right Facebook page turned into a new antivax forum,^{lix} the homepage^{lx} and Facebook page^{lxi} of the *Phytomint Egészség Magazin* (Phytomint Health Magazine) listed as a "partner media" by the Doctors for Clarity,^{lxii} the clickbait page of *Médiaforrás* founded by Dr. Gődény,^{lxiii} finally the old-school antivax Facebook site of the *Oltáskritikus Életvédők Szövetsége - Vaccine Critics Life Protection Association*.^{lxiv} These sites produced not only the most antivax content, but the highest share of disinformation, judged by the number of articles or posts tagged.

Table 5. The top 5 antivax and far right/pro-Kremlin sites based on the number of messages in 2021

media	anti-vax		far-right / pro-Kremlin		
	number of items (articles or posts)	of which tagged	media	number of items	of which tagged
Ébredés (fb)	163	88	nemzeti.net (web)	1,546	28
besthirdetes.hu (web)	41	35	kuruc.info (web)	158	7

anti-vax			far-right / pro-Kremlin		
media	number of items (articles or posts)	of which tagged	media	number of items	of which tagged
Phytomint Egészség Magazin (fb)	37	27	vilagfigyelo.com (web)	80	1
mediaforras.com (web)	26	12	kimondott-igazsagok.com (web)	52	17
Oltáskritikus Életvédők Szövetsége (fb)	16	11	Számok - a baloldali álhírek ellenszere (fb)	22	13

Source: Own calculations based on SentiOne data.

In contrast, the most active top 5 far-right and pro-Kremlin sources engaged in epidemic-related communication were mostly established well-before the current crisis, such as the far-right *Nemzeti.net*, the anti-Semitic *Kuruc.info*, and two of the most prominent pro-Kremlin conspiracy sites: *Kimondott Igazságok* (Revealed Truths) and *Világ Figyelő* (World Watcher). Only the pro-government and Eurosceptic clickbait page of the *Számok - a baloldali álhírek ellenszere* (Numbers - the antidote to left-wing fake-news) was founded recently in November 2019.^{kv} **The top pages of the far-right discourse are not only established and trusted sourced of the Hungarian extremist scenery, but they surprisingly proved to be producing fewer radical and/or disinformation narratives compared to the antivax sources, based on the number of tags.** As seen in the comparative table below (Table 6), out of the 1,862 far-right messages in 2021 only 4% had a geopolitical orientation, 2% disseminated disinformation narratives, and 1% called up people to mobilise online or offline against any COVID-19-related measures, vaccination programs.

Table 6. The number and ratio of tags produced by the antivax and far right/pro-Kremlin sites in each period (as the items, articles or posts, may receive multiple tags, percentages do not add up to 100%)

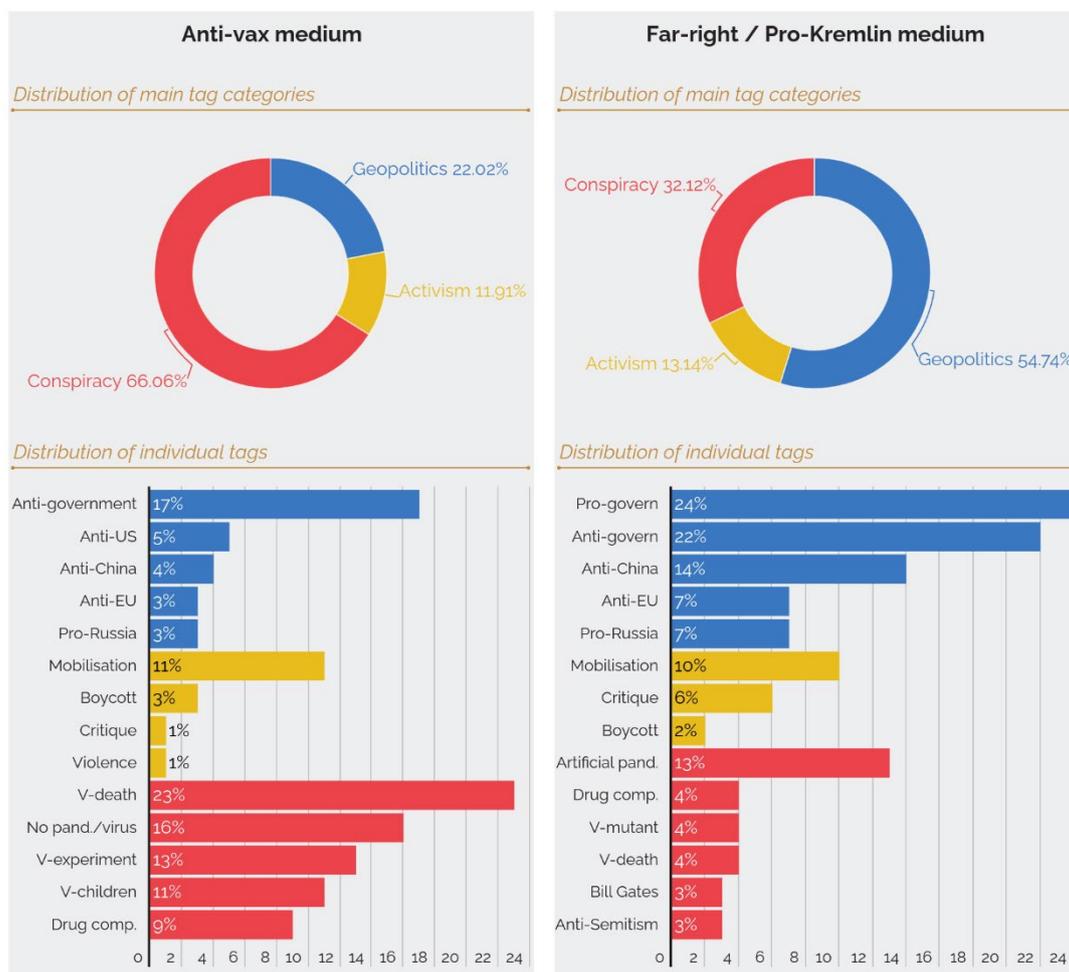
anti-vax		far-right / pro-Kremlin	
Period 1: 15/2-19/2, 2020	Period 2: 18/5-01/6, 2021	Period 1: 15/2-19/2, 2020	Period 2: 18/5-01/6, 2021
Number of items: 8	Number of items: 343	Number of items: 462	Number of items: 1,958
Not tagged: 7 (88%)	Not tagged: 134 (39%)	Not tagged: 449 (97%)	Not tagged: 1,862 (94%)
Conspiracy: 1 (13%) Geopolitics: 1 (13%)	Conspiracy: 183 (53%) Geopolitics: 61 (18%) Mobilisation: 33 (10%)	Conspiracy: 11 (2%) Geopolitics: 8 (2%)	Geopolitics: 75 (4%) Conspiracy: 44 (2%) Mobilisation: 18 (1%)

Source: Own calculations based on SentiOne data.

In comparison, 61% or 209 of anti-vax messages received at least one tag, with most of the articles or posts disseminating disinformation narratives (53% of all messages), followed by content expressing geopolitical views (18%) or intent for mobilisation in the form of online petitions or offline protests (10%). **The fundamental difference between the antivax and far-right/pro-Kremlin discourses on the pandemic could be partly explained by four political elements.** The less radicalized nature of the far-right and pro-Kremlin messages had to do with (1) the Hungarian far-right actors' general pro-government stance, at least in the short-run, which resulted in the *Mi Hazánk Movement* voting for the special Authorization Act or Coronavirus Act,^{lxvi} granting the government emergency powers; (2) the anti-fearmongering clause of the new Coronavirus Act preventing or limiting the circulation of disinformation in far-right fringe media; (3) the support expressed for Eastern vaccines (Sputnik V or Sinopharm); finally, the *Mi Hazánk Movement's* late attempt to try to capitalize on the antivax anti-establishment attitudes mobilised by the new Hungarian antivax movement in the first place.

The detailed examination of the tagged results only, however, confirmed that far-right and antivax disinformation narratives reflected both the two milieu's differences and similarities. As displayed below (see Table 7), the pro-Russian and pro-Chinese far-right subculture's narratives inferred mostly geopolitical orientation (54%), whereas the highest ratio (66%) of new pandemic-related conspiracies was produced by the new antivax sources and experts. The anti-vaccination activism proved to be a far more controversial phenomenon. If we look at all the messages (with or without tags) produced by the two fringe groups of media in the period under investigation in 2021, it turns out that the new antivax movement has become the real engine of mobilisation in Hungary. Whereas only 1% of all far-right messages received a tag of activism, 18% of all antivax messages called for some form of resistance against government-mandated restrictions or vaccination programs in 2021. When taking into consideration the tagged results only, those messages that expressed some form of a geopolitical orientation, the presence of disinformation or online/offline activism, narratives of activism were much less dominating the antivax communication. In fact, the far-right activism (13%) was higher than that of the antivax media's (12%) if we look at only the tagged messages of radicalization - which proves that the far-right milieu and the *Mi Hazánk Movement* produced overall fewer number of radical messages, compared to the antivax movement, however, a higher share of those far-right messages expressed calls for mobilisation, in line with the far-right party's belated anti-vaccination campaign in May 2021.

Figure 4. The ratios of the three main tag categories and the top five tags in each main tag category based on the number of messages (percentages represent the occurrence of the given tag within all tagged items)¹⁵



Source: Own calculations based on SentiOne data. [Click here](#) to view this figure online.

If we look at the specific geopolitical narratives of the two discourses, it becomes quite clear that most of the narratives are pro-Eastern and anti-Western, which proves that conspiracy theories peddled by Moscow or Beijing found a fertile ground on the Hungarian fringes.¹⁶ The antivax community proved to be more anti-US, with actual narratives detailing the Director of the National Institute of Allergy and Infectious Diseases Anthony Fauci's family financially benefitting from the cooperation with the Bill and Melinda Gates Foundation,^{lxvii} Bill Gates, Henry Kissinger or George Soros executing an "eugenics" plan under the disguise of the new pandemic.^{lxviii} Whereas, far-right narratives were more Eurosceptic and pro-Russian. A prime example is an article published by Nemzeti.net that summarised the thoughts of Sergey Naryshkin, the Director of the Foreign Intelligence Service, about "EU leaders slandering Moscow for inciting the anti-vaccine

¹⁵ The top five narrative types within the "activism" category could not be named since we only categorised a total of four subnarratives. The far-right conspiratorial sub narratives numbered six instead of five due to the equal ratios of two different narratives.

¹⁶ A development also encouraged by the Hungarian government's pro-Eastern communication and import of the Sinopharm and Sputnik V vaccines.

movement.^{lxix} The Hungarian page of the Kremlin-affiliated Newsfront accused the EU's leadership of "blocking the European certification of the Sputnik-V vaccine" for political reasons.^{lxx} **At the same time, the two discourses displayed a high-level of anti-Chinese propensity, which underscores Beijing's diminished standing because of the current crisis.**

Interestingly, the two groups differed in the conspiratorial explanation of the pandemic more. Whereas far-right actors tended to view the pandemic some sorts of "artificial" phenomena (13%) orchestrated by drug companies (4%), Bill Gates (3%) or a Jewish world-conspiracy (3%), antivax sources still tended to deny the existence of the pandemic or the virus in 2021 (16%). Instead, antivax conspiratorial thinking was clearly dominated by narratives about the vaccination programs, alleging falsely that vaccines cause death (23%), they are still in an experimental phase (13%) or cause harm in children (11%).

One of the main differences between the two discourses lies in their stance to the Hungarian government and related anti-government mobilisation. Whereas the far-right communication expressed both pro-government and anti-government sentiments based on the tagged results, the antivax milieu produced only anti-government messages, reaching 17% of messages tagged for the same period. The higher anti-establishment attitude of the antivax community could be explained by the behaviour of the leading anti-vax experts and the Mi Hazánk Movement' late turnabout to oppose the Hungarian government's handling of the pandemic.

Content sharing on the fringes: competition instead of cooperation

Statistical analysis

Besides the similarity of narratives, we tried to determine whether the two community's communication did in fact share the same messages in the form of URLs or domains to test our initial hypothesis about the new Hungarian anti-vax movement being further radicalized by the pro-Russian and pro-Chinese far-right subculture led by the Our Homeland Movement.

Based on ratio of direct links (see Table 7 below) specific URLs shared by either of the two groups of media,¹⁷ we can conclude that direct content (articles or posts) sharing was very low, they accounted for less than 1% of links shared by both antivax or far right/pro-Kremlin media on our lists in 2020 or 2021.¹⁸ Far-right homepages, Facebook pages and groups shared a little more antivax links (461) than the number of far-right links (295) posted by the anti-vax media.¹⁹

¹⁷ Our data set scraped by the SentiOne software was complemented by data acquired through the CrowdTangle software to account for the Facebook groups data on our fringe lists that were not available through the SentiOne platform.

¹⁸ Our analysis identified all links shared by any of the fringe groups, which means that these numbers represent not only fringe, but mainstream content as well referenced by any fringe actor. Therefore, contents sharing between these sites does not concern only fringe content produced by our sources alone. Data represents the number of URLs that have an exact match in the respective groups.

¹⁹ The dynamic of the links-share on a yearly basis tells a somewhat different story, with antivax media increasing more their sharing activity from 0,07% for 2020 to 0,34% for 2021, as compared to media in our far right/pro-Kremlin group.

Table 7. Number and proportion of shared URL overlap in antivax and far right/pro-Kremlin media pages

year	anti-vax links shared in far-right / pro-Kremlin media	far-right / pro-Kremlin links shared in anti-vax media	non-matching links shared in the two fringe media	total links shared in the two fringe media
2020	0.26% (280)	0.07% (72)	99.68% (108,894)	100% (109,246)
2021	0.27% (181)	0.34% (223)	99.39% (65,953)	100% (66,357)
Total	0.26% (461)	0.17% (295)	99.57% (174,847)	100% (175,603)

Source: Political Capital’s and International Republican Institute’s calculations based on SentiOne and CrowdTangle data.

These low numbers could be explained on a number of grounds, such as the antivax movement’s reorganisation that prevented them from producing large amounts of antivax content in the first half of 2020 or the Hungarian far-right scene’s late antivax turn that prevented them from sharing antivax content on a large scale until the end of 2020.

In contrast, the domain match table presented below (Table 8) shows a high degree of “overlap” between our fringe lists, in contrast to the sharing of specific articles or posts through exact hyperlinks, that supports, at least partially, our direct “radicalization” hypothesis.²⁰

Table 8. The number and ratio of domains that have an exact match in the antivax and far right/pro-Kremlin fringe media groups

year	anti-vax domains shared in far-right / pro-Kremlin media	far-right / pro-Kremlin domains shared in anti-vax media	non-matching domains shared in the two fringe media	total domains shared in the two fringe media
2020	29.63% (32,371)	4.11% (4,490)	66.26% (72,385)	100% (109,246)
2021	33.29% (22,093)	8.53% (5,662)	58.18% (38,602)	100% (66,357)
Total	31.02% (54,464)	5.78% (10,152)	63.20% (110,978)	100% (175,603)

Source: Political Capital’s and International Republican Institute’s calculations based on SentiOne and CrowdTangle data.

In 2020, the two fringe groups shared altogether 36861 domains or 33,74 % of all domains, numbering 109246. The sharing of domains increased even more in 2021 to 41,82% of the total number of domains. Here as well, the antivax media proved to be more active on a yearly basis, increasing its domain sharing twofold, from 4,11% in 2020 to 8,52% in 2021. Still, the sheer size of the far right/pro-Kremlin fringe media network meant that most of the domains, 54466 for the two years were reposted in the far-right media group. **These numbers proved that our fringe lists were utilising the same types of media contents in their extremist or radicalized discourses.** Looking at the top 10 most shared domains’ table (see Table 9 below), ranked by the number of times they were shared by any of the media on our lists, confirmed **that far-right pages did indeed contribute to the radicalization of the anti-vax media discourse over time.**

²⁰ Of course, these domains are not limited, similarly to the direct URL-matches examined before, to fringe media only, the data represents any fringe or third-party domain referenced by any of the fringe sources under consideration.

Table 9. The top ten domains shared by both the antivax and far right/pro-Kremlin fringe media groups ranked by the number of domains shared

Domain	Number of shares in far-right / pro-Kremlin media	Number of shares in anti-vax media	Total number of shares
www.facebook.com/groups/Normalis.Elet	40	80	120
koronavirus.gov.hu	70	1	71
kimondottigazsakok.com	53	8	61
facebook.com/AWAKENINGtheWORLD	38	2	40
nyugatifeny.hu	19	20	39
facebook.com/DoktorGodeny	17	19	36
vakcinainfo.gov.hu	21	2	23
444.hu	9	11	20
facebook.com/VilagHelyzete	19	1	20
facebook.com/VilagHelyzeteBlog*	19	1	20

*The two Facebook pages of Világ Helyzete belong to the same conspiracy webpage, however, they operate independently from each-other in their dissemination activities

Source: Political Capital's and International Republican Institute's calculations based on SentiOne and CrowdTangle data.

The most shared domain belongs to the “normal life” movement founded by Dr György Gődény, shared 80 times by antivax media and 40 times by far right/pro-Kremlin fringe sites. Gődény also featured personally prominently on the list, his Facebook page, ‘DoktorGodeny’ was the sixth most referenced domain.²¹ Among the third-party pages listed we can find the official state-operated domains of the *koronavirus.gov.hu* and the *vakcinainfo.gov.hu* where all the official statistics, measures, press releases are featured, as well as the independent *444.hu*, the anti-government *nyugatifeny.hu* operated by the Democratic Coalition party. The presence of the aforementioned domains confirms our previous trend analysis about fringe actors reacting to mainstream political actors and media to formulate their anti-establishment messages, which resonate time to time the Hungarian opposition’s critique of the Hungarian government’s handling of the pandemic. **The role of the far-right domains’ in shaping the antivax and extremist discourses is undeniable, since far-right and pro-Kremlin conspiracy sites were among the most frequently referenced domains on our list. These included the homepage of *kimondottigazsakok.com* and Facebook pages of *Awakening the World*, *VilagHelyzete*, *Vilaghelyzete Blog*.** The most shared piece of *kimondottigazsakok.com* was Putin’s statement about AI being the biggest threat to the world after the pandemic,^{lxxi} and a news item about a patient catching the virus despite having received both doses of the Astra-Zeneca vaccine.^{lxxii}

²¹ Dr. Gődény’s most shared Facebook post listed here denied the existence of the pandemic by claiming that “epidemic fanatics staged a coup and seized control of the government,” so everybody needs to head to the hospitals to reveal the fraud. Source: <https://www.facebook.com/DoktorGodeny/photos/a.1881429148783070/2845943948998247/?type=3>

Network analysis

Based on the set of shared domains, we created a network database of interlinked domains to see how our far-right or antivax fringe pages linked to each-other or to third-party domains to produce antivax messages and disinformation narratives. The network database allowed us to create a directed graph²² using the Gephi software²³ to analyse which domains or groups of domains played a central role in the formulation of antivax narratives, how the new antivax movement re-organised itself and reached out to other media, and how the pro-Kremlin Hungarian media tries to influence the discourse on the pandemic in the Hungarian media space. For more on methodology see please Annex 1.

Domain clusters

The full graph, seen on Figure 5, contained altogether 4,860 unique nodes (domains) and 5,492 edges. Using modularity class-ranking to group the nodes,²⁴ we could identify several subgroups or clusters of nodes which occupy statistically a similar network position in terms of their interconnectivity.

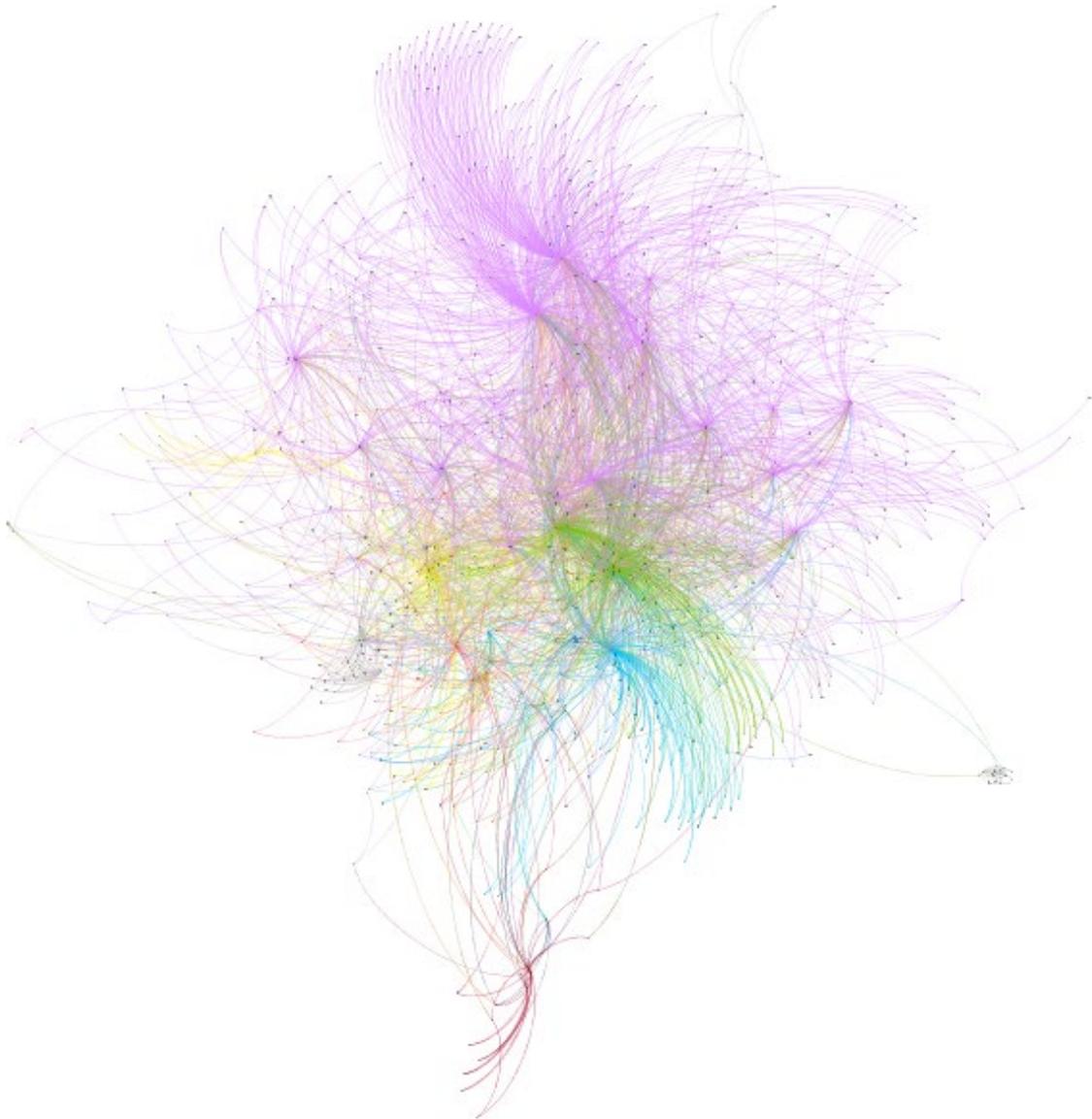
The cluster-analysis revealed 7 different subgroups of nodes or domains that display a high degree of interconnectivity, and account for 77,88% of all nodes. The largest subgroup of 2,000 domains marked in purple is made up of both far-right and antivax pages, such as the domain of the Doctors for Clarity, whereas the second largest green-coloured cluster of 775 domains consist primarily of independent news media, such as the leftist *merce.hu* or the biggest German-owned television station *rtl.hu*. The third most populous blue group of mostly alternative medicine domains is organised by the naturopathic doctor Erika Balaicza M.D, whose separation from the purple group can be explained by the fact that she has not become part of the new the Doctors of Clarity expert platform. The orange and yellow clusters are mostly made up by domains of pro-government mainstream media, such *888.hu* or *origo.hu*, pages of governmental bodies, such as *koronavirus.gov.hu*, and politicians, such as the Facebook page of the Hungarian Prime Minister Viktor Orbán. Interestingly, the yellow group is organised by the Hungarian government's unofficial, fringe propaganda page *Számok - a baloldali álhírek ellenszere* (Numbers - the antidote to left-wing fake-news), whereas Hungarian leading government officials are referenced by the Facebook page of the former leading far-right party *Magyar Fórum*.^{lxxiii} The network of pro-Kremlin formed two different smaller clusters, which reaffirms their special position and strategic communication in the Hungarian media space. The bigger pink pro-Kremlin group of 86 domains is centred around the Facebook page of *Moszkvater.com* operated by a pro-Kremlin journalist Gábor Stier, hyperlinking, for example, the Russian domains of *ria.ru*, *vedomosti.ru* or *tvzvezda.ru*. The smaller, burgundy-coloured group of 50 domains located at the bottom of the graph contains mostly Hungarian pro-Kremlin pages organised by the homepage and Facebook page of *Orosz Hírek* (Russian News) and the Facebook page of *Kiállunk Oroszország Mellett* (We stand by Russia).

²² In mathematics, and more specifically in graph theory, a directed graph (or digraph) is a graph that is made up of a set of vertices connected by directed edges.

²³ 'Gephi - The Open Graph Viz Platform', accessed 12 October 2021, <https://gephi.org/>.

²⁴ Modularity (community detection) is a measure of network structure. It was designed to measure the strength of division of a network into modules. Networks with high modularity have dense connections between the nodes within modules but sparse connections between nodes in different modules.

Figure 5. The complete antivax network diagram and its main clusters displayed in different colours (K-Core=2)



Source: Political Capital's and International Republican Institute's network analysis based on SentiOne and CrowdTangle data. [Click here](#) to download this image in high resolution.

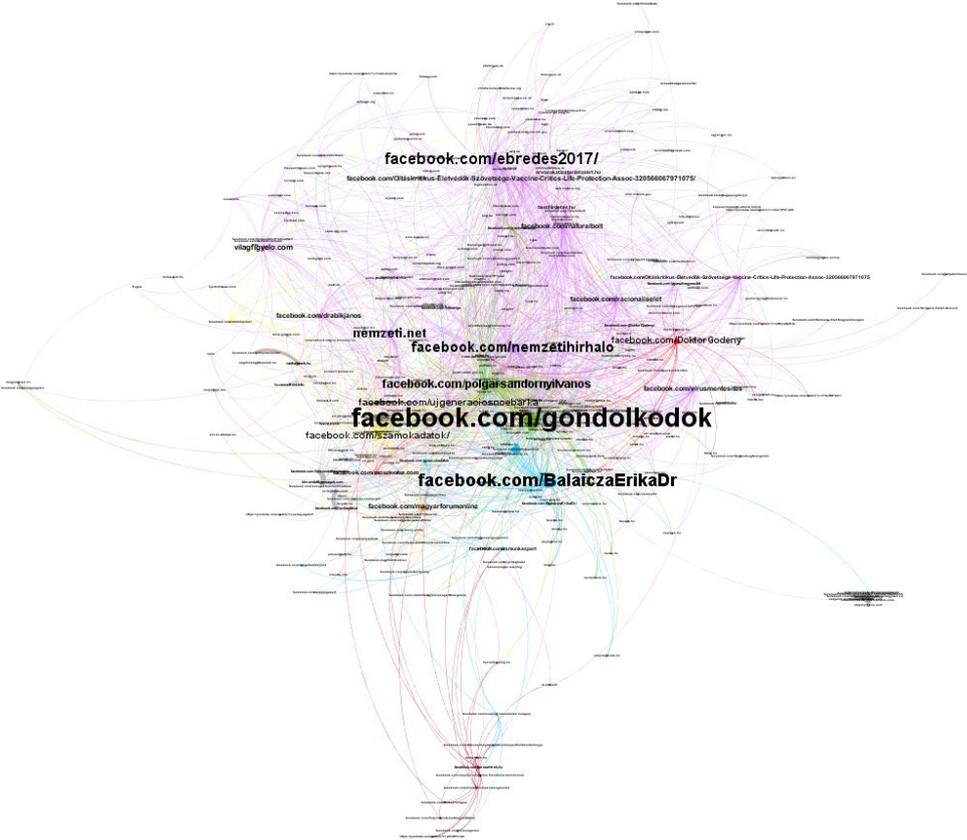
The analysis of clusters reaffirmed our previous conclusion that far-right and antivax media's communication are somewhat dependent on each other's narratives, that resulted in their interconnectedness in the purple group.

Drivers of the network discourse

To identify the primary domains driving the antivax or pandemic-related discourses within and between each cluster, we reduced the number of nodes based on their significance of their position within the network. First, we filtered and removed all nodes with less than 2 edges, applying a k-core score of 3 for the entire graph - resulting in a graph made up of

380 nodes (7,82%) and 1688 edges (30,74%).²⁵ Second, we highlighted the most impactful nodes by ranking each node by the number of maximum degrees or edges. The higher the number of edges, the bigger size each node got to highlight their strong position, using hyperlinks to direct their audience towards other domains or being referenced by any other domain in the graph, as seen on Figure 6 below. The network position of the most prominent antivax domains partially confirmed our previous ranking of the top antivax sites involved in the dissemination of disinformation and conspiracy theories based on the tagging of disinformation, since some of the top disinformation producers feature prominently in the graph as well. The purple antivax cluster is organised around the Ébredés (Awakening), a far-right Facebook page turned into a new antivax forum,^{lxxiv} however, the network analysis revealed the third-party far-right domain of the Nemzeti Hírháló (National News Network) serving as the main “bridge” between the new antivax movement and the rest of the clusters.

Figure 6. The most prominent nodes organising the antivax graph (node size is proportional to the number of connections or edges; k-core = 3)



Source: Political Capital’s and International Republican Institute’s network analysis based on SentiOne and CrowdTangle data. [Click here](#) to download this image in high resolution.

²⁵ A k-core of a graph G is a maximal connected subgraph of G in which all vertices have degree at least k. For example, the 0-core of a graph is simply the entire graph since every vertex has at least zero edges; a vertex can’t have a negative number of edges. The 1-core of a graph contains the vertices that are connected to other vertices.

Other essential nodes organising the antivax discourse included leading far-right conspiracy domains (Világfigyelő, Drábik János), a banned new antivax Facebook page (Gondolkodók),^{lxxv} and an anti-government page with over 60.000 followers (Polgár Sándor nyilvános oldala),^{lxxvi} proving that political and antivax opposition to the government overlaps in the current crisis.

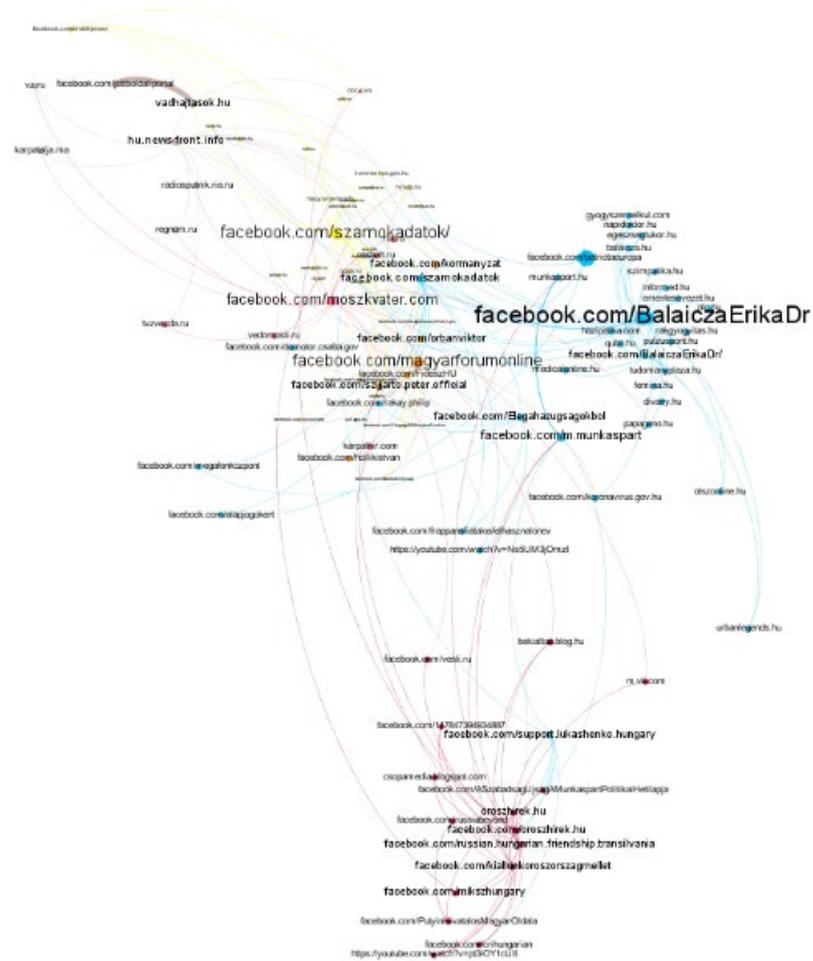
When it comes to the leader of the rejuvenated antivax movement, the ego-networks (depth of 2) of Doktor Gődény's domains (the Facebook page of Doktor Gődény and the homepage of doktorgodeny.hu) marked with red within the purple cluster highlight his centrality in connecting the "old" antivax domains, such as the Vaccine Critics Association, with the "new" brass of the Doctors for Clarity, including the mainstream and far-right milieus (see Figure 7 in Annex 2).

Pro-Kremlin media's integration with pro-government and far-right media

If we look at the pro-Kremlin domain clusters only, it becomes quite clear that they are rarely connected directly to the Hungarian antivax movement, as seen on Figure 7. There is an intimate interplay between fringe sites and pro-government ones in relaying pro-Kremlin content. In the upper right corner, the Hungarian version of News Front connects to the Hungarian daily *Magyar Nemzet*, as well as the pro-government fringe *Vadhajtások*, both reflect the central governmental messages all the time. *Moszkvater*, mentioned above, is another key node that connects many Russian-speaking sites and leading Hungarian pro-government ones, such as *origo.hu*, *demokrata.hu* or *hirado.hu*, the state-owned news channel. The far-right Magyar Fórum Online, alongside the pro-government fringe *Számok - a baloldali álhírek ellenszere* references leading politicians' Facebook pages, among those the Hungarian Prime Minister, the Minister of Foreign Affairs Péter Szijjártó or the Minister of Justice Judit Varga. The burgundy-coloured cluster of domestic pro-Kremlin sites have three main "bridge" nodes connecting them to other domains: the Facebook site of Vesti.ru, the *Bekiáltás blog* operated by the pro-government journalist Lajos Domokos, finally, the Facebook page of the Hungarian Workers' Party (Magyar Munkáspárt), whose leader Gyula Thürmer is frequently praising President Putin's (geo)politics.

Consequently, mainstream and fringe pro-government sites are essential in relaying pro-Kremlin contents between Russian sources and the Hungarian antivax movement based on our network analysis.

Figure 7. The pro-Kremlin clusters of the antivax graph (node size is proportional to the number of connections or edges; k -core = 2)



Source: Political Capital's and International Republican Institute's network analysis based on SentiOne and CrowdTangle data. [Click here](#) to download this image in high resolution.

PATTERNS OR RADICALIZATION: CROSS-POLLINATION

The comparison of fringe narratives, the number of shared URLs and domains revealed a complex mechanism for the radicalization of the Hungarian antivax-scene. **Instead of cooperation, a full-blown competition between the far-right and antivax movements to mobilise the antivax audience and electorate seems to have contributed to the further radicalization of the new antivax movement and attitudes in the Hungarian populace.** Our data on the sharing of URLs has not provided robust proof of cross-posting between the fringes, except for some of the leading antivax and pro-Kremlin conspiracy domains, the similarity of the antivax and pro-Kremlin narratives has still highlighted an active exchange of ideas between the two movements. Irrespective of the competition between the leading actors of the anti-vax and far-right milieus, the two became co-dependent on each-others' activity in spreading antivax and Russian or Chinese-borne disinformation narratives. On the far-right side, the *Mi Hazánk* Movement's summer campaign against the Hungarian government's vaccine mandates and programs clearly relies on antivax narratives and the previous protests, mobilisation of the new antivax movement, social media network founded by Dr Gődény and the experts of the Doctors for Clarity association. A prime example is the *Mi Hazánk* Movement's single MP and the party's Deputy President Dóra Dúró, who campaigned against mandatory COVID-19 vaccination in June 2021 by claiming that the new vaccines are "three times more deadly for children than the coronavirus itself," such false warnings about the inoculation of children were first published by Dr. Gődény^{lxxvii} and a whole subsection of the Doctors for Clarity homepage from December 2020 onwards.^{lxxviii} On the other hand, Gődény's movement has picked up a video showing a Belarusian government session in which Alexander Lukashenko, the country's disputed leader claimed that the IMF and the World Bank offered him a bribe worth USD 940 million in exchange for imposing COVID-19 restrictions.^{lxxix} **These data and evidence prove two sub-mechanism of online radicalization in play: geopolitical conspiracy theories about the COVID-19 epidemic has been formulated and spread by the Hungarian far-right and pro-Kremlin scene first; however, the new antivax milieu emerged as the novel consumer or even reproducer audience of these conspiracies.** In the end, the bulk of radicalization is executed by the Hungarian antivax movement, however, their belief system, at least partially, is originating in the far-right subculture, whose antivax campaign is supercharged by the antivax mobilisation of Dr Gődény.

ANNEX 1

Research Methodology

Our research employed both qualitative and quantitative methodology to monitor and collect historical media data present on Hungarian fringe anti-vax and far right/pro-Kremlin webpages and Facebook pages, groups. The quantitative dataset used in the analysis was generated using the SentiOne social media listening platform, as well as the CrowdTangle software that allowed us to access Facebook groups' data.

After a manual compilation of the top 30 far right/pro-Kremlin and 39 antivax-fringe sources based on a snowball sampling, we monitored their data production between 1 January 2020 and 1 June 2021 through a pre-set of keywords to identify and collect any relevant communication in the forms of articles, posts or comments related to the COVID-19 pandemic or the vaccination programs. Data collected on the platform were analysed by Political Capital's experts to locate, categorise, quantify, and contextualise disinformation narratives, conspiracy theories produced by the fringe sources under consideration.

Based on our previous analyses of COVID-19 related disinformation,^{lxxx} we established a preliminary categorisation of disinformation narratives. Previous research suggests that pandemic disinformation either reflect on people's everyday health concerns over the infection or collective societal responses that address the current and unprecedented health crisis. COVID-19 disinformation, therefore, has three basic functions to fulfil in terms of determining (1) the existence and (2) the explanation of the COVID-19 epidemic, including (3) the identification of persons or groups thought to be "responsible" for its outbreak.²⁶

Based on specific keywords, such as "artificial," "laboratory," "world domination," "Bill Gates," "poison," "5G" etc., we measured the occurrence of possible narratives containing these words in fringe far right/pro-Kremlin and antivax Hungarian media. After reviewing the results, we created three sets of tags that categorise the (1) "main topic" of significant narratives; (2) the geopolitical orientation of narratives; finally, (3) the level of online or offline "activism" expressed by the authors in their Facebook posts or articles.

Main topic tags included: (there is) no pandemic or no virus; conspiracy; artificial pandemic or virus; (pandemic caused by) secret service; Bill Gates; (responsibility of) drug companies; vaccine chip; vaccine mutants; vaccines 5G; vaccine experiment; vaccine pregnancy; vaccine death; vaccine children; anti-Semitism.

Geopolitical tags included: no geopolitics; pro-US; anti-US; pro-EU; anti-EU; pro-NATO; anti-NATO; pro-Russia; anti-Russia; pro-China; anti-China; pro-government; anti-government.

Tags of activism included: critique; boycott; online or offline mobilisation; violence.

Political Capital's researchers manually tagged two samples of articles and Facebook posts for two research periods between 15 and 29 February 2020, as well as between 18 May and 1 June 2021.

²⁶ The search for persons or organisations responsible for any social calamity reflects the everyday need to reinterpret and simplify complex, impersonal societal mechanism as more comprehensible "actions" of individuals or societal groups.

Statistical analysis of the results allowed to identify the prevalence and evolution of antivax narratives over time.

In order to test our hypothesis from 2 through 4, we have examined the cross-posting of the same contents (URLs or domains) on antivax or far-right media, as well as the similarity of antivax and far-right narratives based on manually tagged articles and Facebook posts for two research periods between 1 January 2020 and 1 June 2021. Thus, the overlap between the antivax and the far-right movements' communication was determined basically by the similarity of far right, antivax narratives and/or the sharing of the same URLs or domains.

Based on the set of shared domains, we created a network database of interlinked domains to see how our far-right or antivax fringe pages linked to each-other or to third-party domains to produce antivax messages and disinformation narratives. The network database was generated by using the domain hyperlinks found in any of the messages published by our two fringe "seed" lists, which revealed how our initial homepages or Facebook pages linked themselves (their own content), each-other or third-party domains. After providing each domain with a unique "node" identifier, the number of edges between two nodes were determined by the hyperlinks found in each domain's messages. So, if page A hyperlinked page B's domain in 20 of its messages, and page B hyperlinked page A in 15 of its messages, then the number of connections between A and B in the database numbered 35 edges or connections. The network database allowed us to create a directed graph²⁷ using the Gephi software²⁸ to analyse which domains or groups of domains played a central role in the formulation of antivax narratives, how the new antivax movement re-organised itself and reached out to other media, and how the pro-Kremlin Hungarian media tried to influence the discourse on the pandemic in the Hungarian media space by referencing or being referenced by other media in our database.

Since our analysis is media research, we have defined "radicalization" as follows:

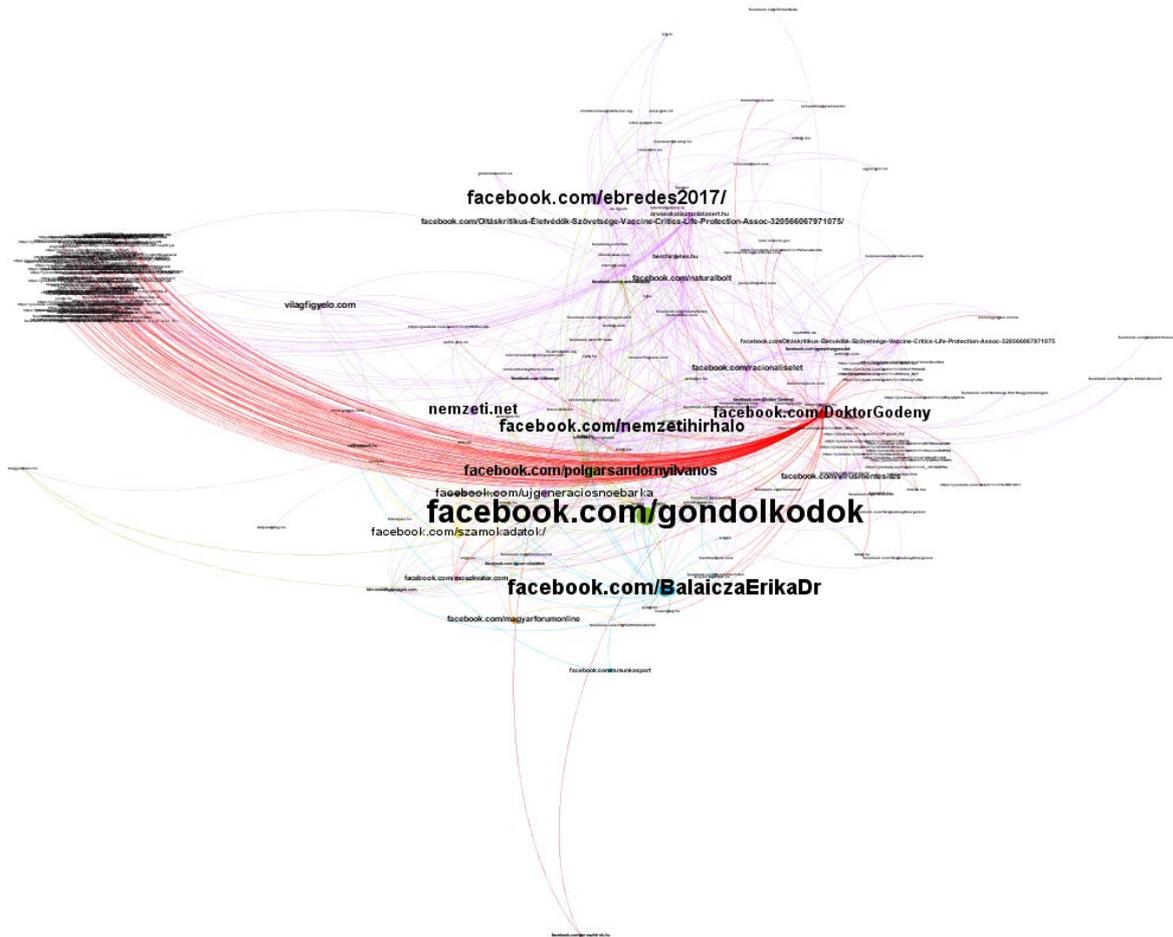
- Radicalization in itself is defined as the emergence and multiplication of disinformation sources, narratives and messages to deny, relativise or mobilise against the health countermeasures or the severity of the COVID-19 crisis. The first stage of radicalization is, therefore, a simple matter of quantity of in the production of antivax messages or narratives.
- Radicalization between movements is defined as the dissemination or copying of each-others' disinformation sources, narratives, messages to deny, relativise or mobilise against the health countermeasures or the severity of the COVID-19 crisis.

²⁷ In mathematics, and more specifically in graph theory, a directed graph (or digraph) is a graph that is made up of a set of vertices connected by directed edges.

²⁸ 'Gephi - The Open Graph Viz Platform', accessed 12 October 2021, <https://gephi.org/>.

ANNEX 2

Doktor Gődény Facebook page's ego-network (depth of 2) marked with red in the graph



Source: Political Capital's and International Republican Institute's network analysis based on SentiOne and CrowdTangle data.

ANNEX 3

References

- ⁱ 'Elnéptelenítés, Eugenika, PCR, Pfizer-Biológiai Fegyver', accessed 20 September 2021, <https://www.facebook.com/455136387830151/posts/4321058381237913>.
- ⁱⁱ 'Sokak Szerint a Vírus Mesterséges', accessed 22 September 2021, <https://www.facebook.com/859181850817715/posts/2659317157470833>.
- ⁱⁱⁱ 'Attitudes on Vaccination against Covid-19 - June 2021 - - Eurobarometer Survey', accessed 30 August 2021, <https://europa.eu/eurobarometer/surveys/detail/2512>.
- ^{iv} Hannah Ritchie et al., 'Hungary: What Has Been the Impact of the Coronavirus Pandemic (COVID-19)?', *Our World in Data*, 5 March 2020, <https://ourworldindata.org/coronavirus/country/hungary>.
- ^v 'COVID-19 Vaccine Tracker | European Centre for Disease Prevention and Control', accessed 14 October 2021, <https://vaccinetracker.ecdc.europa.eu/public/extensions/COVID-19/vaccine-tracker.html#uptake-tab>.
- ^{vi} Johanna Rác, 'Zajos, felhergelt kisebbség vezérli a magyar oltásellenességet, de valójában egyre többen vállalják az oltást', *Qubit*, 13 January 2021, <https://qubit.hu/2021/01/13/zajos-felhergelt-kisebbsseg-vezerli-a-magyar-oltasellenesseget-de-a-valosagban-egyre-tobben-vallalnak-az-oltast>.
- ^{vii} 'GLOBSEC Trends 2021: Central and Eastern Europe One Year into the Pandemic - GLOBSEC', accessed 31 August 2021, <https://www.globsec.org/publications/globsec-trends-2021/>.
- ^{viii} Eva Bogner, '2021 Digital News Report Hungary', Reuters Institute for the Study of Journalism, accessed 31 August 2021, <https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2021/hungary>.
- ^{ix} 'Adjátok Vissza a Normális Életünket - Posts | Facebook', accessed 1 September 2021, <https://www.facebook.com/AdjatokVissza/posts/110070687375016:1>.
- ^x 'Normális Élethez Ragaszkodók Csoportja', accessed 1 September 2021, <https://www.facebook.com/groups/Normalis.Elethez.Ragaszkodok>.
- ^{xi} 'Pártba terelné híveit a járványtagadó Gődény György - Vajon elindul a 2022-es választásokon?', *Blikk*, 2021, <https://www.blikk.hu/aktualis/belfold/godeny-gyorgy-orszaggyules-part-valasztasok-politikai-ambicio/3rwlz3q>.
- ^{xii} 'Rólunk', *Orvosok és Egészségügyi Dolgozók a Tisztánlátásért*, accessed 1 September 2021, <https://orvosokatisztanlatasert.hu/rolunk/>.
- ^{xiii} 'Doctors for Clarity - Scientific Conference I.', *Orvosok és Egészségügyi Dolgozók a Tisztánlátásért*, 26 August 2020, <https://orvosokatisztanlatasert.hu/doctors-for-clarity-scientific-conference/?lang=en>.
- ^{xiv} 'Ajánlom Robert F. Kennedy Videóját', accessed 22 September 2021, <https://www.facebook.com/watch/?v=1528725827479799>.
- ^{xv} 'Kérjük Az Elrendelt Maszkhordási-Kötelezettség Eltörlését.', *Peticiok.com*, accessed 1 September 2021, https://www.peticiok.com/kerjuk_az_elrendelt_maszkhordasi-kotelezettség_eltorleset.
- ^{xvi} *444.hu*, *Ahhoz, Hogy Ezt Az Egész COVID-Öt Átlásd, Már Nem Elég, Ha Százaz Vagy*, 2020, https://www.youtube.com/watch?v=1rcX2OWTx_U.
- ^{xvii} 'Körülbelül ezren tüntettek Gődény György hívására a Hősök terén', *24.hu* (blog), 28 February 2021, <https://24.hu/belfold/2021/02/28/tuntetes-koronavirus-godeny-gyorgy-gyogyszerezs-virustagado-hosok-tere-igazlatas/>.
- ^{xviii} 'Másfél millió büntetést kaphatott Gődény a március 15-ei tüntetés miatt', *24.hu* (blog), 19 March 2021, <https://24.hu/belfold/2021/03/19/masfel-millios-buntetest-kaphatott-godeny-a-marcius-15-ei-tuntetes-miatt/>.
- ^{xix} 'Jön az oltatlansági igazolvány, ezt ígéri Gődényék', *Napi.hu*, accessed 22 September 2021, <https://www.napi.hu/magyar-gazdasag/oltas-vakcina-koronavirus-covid-19-jarvany-godeny-gyorgy.731396.html>.
- ^{xx} VG, 'Vizsgálódik a GVH Gődény György miatt', *Világgazdaság*, 29 October 2020, <https://www.vg.hu/kozelet/2020/10/vizsgalodik-a-gvh-godeny-gyorgy-miatt>.
- ^{xxi} Netiq.biz, 'Nutriversum.com kedvezmény kupon - szeptember 2021', *KuponKodok.net*, accessed 6 September 2021, <https://kuponkodok.net/s/nutriversum-com/>.
- ^{xxii} AD Design Solutions, 'Dr. Lenkei Channel', *Dr. Lenkei Channel*, accessed 6 September 2021, <https://drlenkeichannel.com/en/>.

-
- xxiii 'Százmilliókkal gazdagította a járvány a vírusszkeptikus Dr. Lenkeit, nagyot szakítottak Dr. Gődénnyel is | G7 - Gazdasági sztorik érthetően', 2 June 2021, <https://g7.hu/kozelet/20210602/szazmilliokkal-gazdagitotta-a-jarvany-a-virusszkeptikus-dr-lenkeit-nagyot-szakitott-dr-godeny-is/>.
- xxiv 'Felfüggesztették: Fél Évig Nem Dolgozhat a Vírusszkeptikus Orvos', Medical Online, accessed 7 September 2021, http://medicalonline.hu/eu_gazdasag/cikk/felfuggesztettek_fel_evig_nem_dolgozhat_a_virusszkeptikus_orvos.
- xxv 'Dr. Pócs Alfréd Ortopéd-Sebész Orvosi Állásába Való Visszahelyezéséért', Peticiok.com, accessed 7 September 2021, https://www.peticiok.com/dr_pocs_alfred_traumatologia_orvosi_allasaba_valo_visszahelyezeseer.
- xxvi 'Nekimegy a kormány a rémhír terjesztőknek, oltáselleneseknek és a víruseszten nyereszkeskedőknek', Portfolio.hu, accessed 20 September 2021, <https://www.portfolio.hu/gazdasag/20201030/nekimegy-a-kormany-a-remhir-terjesztoknek-oltaselleneseknek-es-a-viruseszten-nyereszkeskedoknek-455136>.
- xxvii Joao Matsinhe Dénes, 'Lecsapott a rendőrség Gődényre: hajnalban bevitték, estére kiengedték', 11 December 2020, https://index.hu/belfold/2020/12/11/nagy_pacban_a_jarvanytagadok_papaja_godeny_gyorgy/.
- xxviii Zrt HVG Kiadó, 'Felfüggesztett börtönbüntetést kapott Gődény György', hvg.hu, 21 September 2021, https://hvg.hu/itthon/20210921_felfuggesztett_bortonbuntes_godeny_gyorgy.
- xxix 'Itthon: Egymillió Forintra Bírságolták Gődény Györgyöt | Hvg.Hu', accessed 20 September 2021, https://hvg.hu/itthon/20210308_godeny_gyorgy_szabalsertesi_birsag_rendorseg_tuntetes.
- xxx 'Facebook Removes Hungarian Coronavirus Skeptic Pages', *Hungary Today* (blog), 25 September 2020, <https://hungarytoday.hu/facebook-removes-hungarian-coronavirus-skeptic-pages/>.
- xxxi 'Végleg törölték Gődény YouTube-csatornáját, pedig azt mondja, tudományos eredményekkel érvelt', telex, 7 September 2021, <https://telex.hu/belfold/2021/09/07/vegleg-toroltek-godeny-youtube-csatornajat-pedig-azt-mondja-tudomanyos-eredmenyekkel-ervelt>.
- xxxii Forrás:szilajcsiko.hu, 'Koronavírus járvány - micsoda véletlenek!', *Nemzeti.net* (blog), 28 January 2020, <https://nemzeti.net/koronavirus-jarvany-micsoda-veletlenek-15312205.html>.
- xxxiii 'Bill és Melinda Gates alapítványa áll a vírus elterjesztése mögött? Itt van a kutya elásva...', A világ titkai | Rejtélyek, paranormál, ufo, összeesküvés, és minden, amit nem mondtak még el..., accessed 22 September 2021, <https://avilagtitkai.com/articles/view/bill-es-melinda-gates-alapitvanya-all-a-virus-elterjesztese-mogott-itt-van-a-kutya-elasva>.
- xxxiv 'Sokak Szerint a Vírus Mesterséges'.
- xxxv Szerző, 'Kína Felemelkedése', *Bal - Rad* (blog), 27 January 2020, <https://balrad.ru/2020/01/27/kina-felemelkedese/>.
- xxxvi 'Magyarok Világkongresszusa (2021.08.15-20) 3-4 napi (2021.08.17-18) programja - II. Budapesti COVID Konferencia', Orvosok és Egészségügyi Dolgozók a Tisztánlátásért, accessed 6 September 2021, <https://orvosokatisztanlatasert.hu/konferencia-budapest-2021-augusztus-17-18/>.
- xxxvii Toroczka László, *Így Épül Az Új Világrend a Koronavírus Árnyékában [ENG SUB]*, 2021, <https://www.youtube.com/watch?v=G5d1EmPusGU>.
- xxxviii István Bereznay, 'Kaszinó előtt fog tüntetni március 15-én a Mi Hazánk Mozgalom', 5 March 2021, https://index.hu/belfold/2021/03/05/torockai_laszlo_mi_hazank_koronavirus-korlatozasok-tuntetes/.
- xxxix 'A kötelező Covid-oltás ellen tüntetett a Mi Hazánk', *24.hu* (blog), 4 September 2021, <https://24.hu/kozelet/2021/09/04/koronavirus-kotelezo-oltas-tuntetes-mi-hazank-miniszterelnokseg/>.
- xl 'A Politikai Haszonszerzés Gátlástalan!', accessed 7 September 2021, <https://www.facebook.com/DoktorGodeny/posts/2851692728423369>.
- xli János Kemény, 'Gődény György, a zsidó biznispártos Izrael zászlaját tetováltatta magára', *Magyar Jelen* (blog), 26 February 2021, <https://magyarjelen.hu/godeny-gyorgy-a-zsido-biznispartos-izrael-zaszlajat-tetovaltatta-magara/>.
- xlii 'Kuruc.info - Történetének legnagyobb óriásplakát-kampányát indította el a Mi Hazánk', Kuruc.info hírportál, accessed 7 September 2021, <https://kuruc.info/r/2/233267/>.
- xliii Lóránt Győri, Péter Krekó, and Dominik Istrate, 'Disinformation after the First Wave of the Coronavirus in Central Europe', n.d., 25.

-
- ^{xliv} 'Az Orbán-kormány furcsa elköteleződése az orosz koronavírus-vakcina iránt', accessed 22 September 2021, https://politicalcapital.hu/hirek.php?article_id=2637.
- ^{xlv} Nemzet Magyar, 'Aláírásgyűjtés a baloldal halálkampánya ellen', Aláírásgyűjtés a baloldal halálkampánya ellen, 5 January 2021, <https://magyarnemzet.hu/belfold/2021/01/bayer-zsolt-az-elmult-evtizedek-egyik-legnagyobb-gazembersegerol>.
- ^{xlvi} Balázs Gabay, 'Magyarország vakcinarekorder lett Európában', 17 March 2021, <https://index.hu/gazdasag/2021/03/17/vakcina-rekord-magyarorszag-ecdc/>.
- ^{xlvii} Illés Szurovecz, 'Egyetlen országban sem ápoltak még kórházban ennyi koronás beteget lakosságárányosan', 444, 23 March 2021, <https://444.hu/2021/03/23/egyetlen-oroszban-sem-apoltak-meg-korhazban-ennyi-koronas-beteget-lakossagaranyosan>.
- ^{xlviii} 'A rendőrség bohócokat kerget, a konteócsatornák zavartalanul nyomják a koronás hülyeséget | atlatszo.hu', 28 April 2020, <https://atlatszo.hu/2020/04/28/a-rendorseg-bohocokat-kerget-a-konteocsatornak-zavartalanul-nyomjak-a-koronas-hulyeseget/>.
- ^{xlix} 'VESZÉLYES-E Az MRNS Oltás?', accessed 22 September 2021, <https://www.facebook.com/watch/?v=222806629243131>.
- ⁱ 'A Legrosszabb Esetben Sem Számítottak Erre! - Doktor Gődény', accessed 22 September 2021, <https://doktorgodeny.hu/a-legrosszabb-esetben-sem-szamitottak-erre-123886>.
- ⁱⁱ 'LEHET NORMÁLISAN IS KÉPVISELNI AZ EMBEREKET!', accessed 22 September 2021, <https://www.facebook.com/watch/?v=2332800190360046>.
- ⁱⁱⁱ 'Putyin Megmutatta Emberi Nagyságát: Olaszország Segítségére Siet.', accessed 22 September 2021, <https://www.facebook.com/szamokadatok/posts/151139469696528/>.
- ⁱⁱⁱⁱ 'Professzor Dr. Sucharit Bhakdi Mikrobiológus', accessed 20 September 2021, <https://www.facebook.com/apaszivegyesulet/videos/222806629243131/>.
- ^{liv} 'Fact Check: COVID-19 Vaccines Don't Cause Death, Won't Decimate World's Population', USA TODAY, accessed 20 September 2021, <https://www.usatoday.com/story/news/factcheck/2021/04/30/fact-check-covid-19-vaccines-dont-cause-death-wont-depopulate-planet/7411271002/>.
- ^{lv} 'Akadnak Értelmes Emberek Is Egy Parlamentben!', accessed 20 September 2021, <https://www.facebook.com/watch/?v=448023936374854>.
- ^{lvi} 'Néhány Hónapja Még Blöffnek Tartotta', accessed 7 September 2021, <https://www.facebook.com/222935035147780/posts/1009925456448730>.
- ^{lvii} '6000 Ampullányi Orosz Vakcina Érkezett Magyarországra (Videó)', accessed 7 September 2021, <https://www.facebook.com/1845156472374135/posts/2983640731859031>.
- ^{lviii} 'Beszéljünk kicsit az összeesküvés elméletekről | dr. Tamasi József - Belgyógyászat, természetes gyógymódok, életmód', *dr. Tamasi József* (blog), 18 February 2020, <https://tamasidr.hu/beszeljuenk-kicsit-az-osszeeskueves-elmeletekrol/>.
- ^{lix} 'Ébredés | Facebook', accessed 13 September 2021, <https://www.facebook.com/ebredes2017/>.
- ^{lx} 'Phytomint Egészség Magazin', accessed 13 September 2021, <https://besthirdetes.hu/>.
- ^{lxi} 'Phytomint Egészség Magazin | Facebook', accessed 13 September 2021, <https://www.facebook.com/naturalbolt/>.
- ^{lxii} 'Más hazai oldalak', Orvosok és Egészségügyi Dolgozók a Tisztánlátásért, accessed 13 September 2021, <https://orvosokatisztanlatasert.hu/mas-hazai-oldalak/>.
- ^{lxiii} 'MédiaForrás', mediaforras.com, accessed 13 September 2021, <https://mediaforras.com/>.
- ^{lxiv} 'Oltáskritikus Életvédők Szövetsége - Vaccine Critics Life Protection Assoc. | Facebook', accessed 13 September 2021, <https://www.facebook.com/Olt%C3%A1skritikus-%C3%89letv%C3%A9d%C5%91k-Sz%C3%B6vets%C3%A9ge-Vaccine-Critics-Life-Protection-Assoc-320566067971075/>.
- ^{lxv} 'Számok - a Baloldali Álhírek Ellenszere | Facebook', accessed 13 September 2021, <https://www.facebook.com/szamokadatok>.
- ^{lxvi} 'A Mi Hazánk képviselői megszavazzák a felhatalmazási törvényt', Magyar Hang, accessed 14 September 2021, <https://hang.hu/belfold/a-mi-hazank-kepviseloi-megszavazzak-a-felhatalmazasi-torvenyt-114621>.
- ^{lxvii} 'Anthony Fauci', accessed 20 September 2021, <https://www.facebook.com/ebredes2017/photos/a.262910907083931/5476109459097357/>.
- ^{lxviii} 'Elnéptelenítés, Eugenika, PCR, Pfizer-Biológiai Fegyver'.

^{lxi} Forrás: karpainfo.net, 'Orosz hírszerzési vezető: Európában meg fogják rágalmozni Moszkvát az oltásellenes mozgalom szításával', *Nemzeti.net* (blog), 19 May 2021, <https://nemzeti.net/orosz-hirszerzesi-vezeto-europaban-meg-fogjak-ragalmozni-moszkvat-az-oltasellenes-mozgalom-szitasaval-18583651.html>.

^{lxx} 'Az oroszok szerint az EU magas rangú vezetőinek utasítására blokkolják a Szputnyik V oltóanyag tanúsítását', *Tájékoztató ügynökség*, 19 May 2021, <https://hu.news-front.info/2021/05/19/az-oroszok-szerint-az-eu-magas-rangu-vezetoinек-utasitasara-blokkoljak-a-szputnyik-v-oltoanyag-tanusitasat/>.

^{lxxi} wadmin, 'Putyin figyelmeztet: ez sokkal rosszabb lesz, mint bármilyen fegyver vagy atombomba a történelemben | Kimondott Igazságok', accessed 15 September 2021, <http://kimondottigazsagok.com/putyin-figyelmeztet-ez-sokkal-rosszabb-lesz-mint-barmilyen-fegyver-vagy-atombomba-a-tortenelemben/>.

^{lxxii} wadmin, 'Második védőoltás után lett pozitív koronavírus tesztje: egyre több hasonló este jöhet? - RTL híradó | Kimondott Igazságok', accessed 15 September 2021, <http://kimondottigazsagok.com/masodik-vedooltas-utan-lett-pozitiv-koronavirus-tesztje-egyre-tobb-hasonlo-este-johet-rtl-hirado/>.

^{lxxiii} 'Magyarforum | Facebook', accessed 12 October 2021, <https://www.facebook.com/magyarforumonline/>.

^{lxxiv} 'Ébredés | Facebook', accessed 12 October 2021, <https://www.facebook.com/ebredes2017>.

^{lxxv} 'Gondolkodók', accessed 12 October 2021, <https://www.facebook.com/gondolkodok>.

^{lxxvi} 'Polgár Sándor Nyilvános Oldala | Facebook', accessed 12 October 2021, <https://www.facebook.com/polgarsandornylvanos/>.

^{lxxvii} 'Ennyi Mellékhatást Oltásnál Még Nem Láttam!', accessed 15 September 2021, <https://doktorgodeny.hu/ennyi-mellekhatast-oltasnal-meg-nem-lattam-123742>.

^{lxxviii} 'Gyerekeink Archives', *Orvosok és Egészségügyi Dolgozók a Tisztánlátásért*, accessed 15 September 2021, <https://orvosokatisztanlatasert.hu/category/irasok/gyerekeink/>.

^{lxxix} 'Lukasenko - Belorusz Kormányülés', accessed 22 September 2021, <https://www.facebook.com/groups/372833089730030/search/?q=belorusz>.

^{lxxx} 'Main narratives about COVID-19 in the V4 countries during the first wave of the pandemic', accessed 16 September 2021, https://politicalcapital.hu/news.php?article_id=2666&fbclid=IwAR2g2V4kGDRH4RNUtBv1-Urc7QK-1YTjK6bJTE-POmqbhb2kKaCKIDTII2k.