

Disinformation Overdose

A study of the Crisis of Trust among
Vaccine Sceptics and Anti-Vaxxers

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Note on links

There are several ethical risks associated with the inclusion of direct links to channels and content promoting extremism and conspiracy theories. These include the risk of giving too much space to dangerous narratives and content and the risk of signposting people to extremist content, but also the risk of publicly identifying the individuals involved in these communities. With these risks in mind, we have refrained from providing direct links to the content and channels analysed in this report. We can however supply a list of links to the relevant webpages upon request.

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Glossary

Alternative medicine

“Alternative medicine” is a collective term used to describe diagnostic and therapeutic approaches that are positioned as an alternative to science-based medicine. It has been proven that many of these therapeutic methods are no more effective than a placebo. Homeopathy and anthroposophy hold a special legal status in this regard, since the German Medicinal Products Act recognises them as special therapeutic options and they are exempt from needing to provide scientific evidence of their effectiveness. Alternative medicine often strays into the realm of pseudoscience.

AstraZeneca

In this context, *AstraZeneca* stands for the vector vaccine *Vaxzevria* (known as *COVID-19 Vaccine AstraZeneca* before 25 March 2021), which was developed on the basis of cooperation between the British-Swedish pharmaceutical group *AstraZeneca PLC* and researchers at the University of Oxford.

Coronavirus

The term “coronavirus” is used to refer to the novel coronavirus SARS-CoV-2 (acronym for “severe acute respiratory syndrome coronavirus type 2”) and as a descriptor when referring to the public health measures and social impacts associated with the pandemic. In common parlance, “coronavirus” is also used as a synonym for the disease COVID-19.

COVID-19

COVID-19 (acronym for “coronavirus disease 2019”) is an infectious disease caused by SARS-CoV-2 viruses. On 11 March 2020, the World Health Organization (WHO) declared the COVID 19 outbreak a global pandemic.

Esotericism

There is no general definition of the term “esotericism”. It is often used in a judgemental or derogatory way, however, and typically covers a spectrum of “occult doctrines”, the exact details of which are beyond the comprehension of large swathes of the population. Many of the varieties of esotericism – which are often ideologically shaped – centre around mysticism, spiritual growth and “higher knowledge” about the world.

Non-medical practitioner

The term “non-medical practitioner” refers to individuals who work in the field of medicine without being qualified as a doctor, pharmacist or psychotherapist. In Germany, non-medical practitioners require state approval to exercise their profession and are governed by the provisions of the German Non-Medical Practitioners Act of 1939.

Vaccine sceptic/anti-vaxxer

The terms “vaccine sceptic” and “anti-vaxxer” cover a wide range of attitudes that are characterised by distrust of a specific vaccine or vaccines in general. Vaccine sceptics are not categorically opposed to vaccines, but have reservations of varying degrees about them. Certain vaccine sceptics accept some vaccines but reject others, sometimes including the COVID-19 vaccines. By way of contrast, anti-vaxxer are fundamentally opposed to vaccines. Their reasons range from suppositions derived from conspiracy theories to the deeply held belief that all vaccines represent a harmful intervention into the body’s biochemical processes.

Misinformation

Misinformation is genuine information that is taken out of context and shared with the intention of causing harm.

Pseudoscience

The term “pseudoscience” covers assertions and teachings that claim to be scientific but do not meet common scientific standards such as factual verifiability, objectivity and measurability.

QAnon

QAnon is a conspiracy theory and movement that originated on the digital imageboard website 4chan. It centres around the claim that the former US President Donald Trump was waging a secret war against an alleged “deep state” and a cabal of Satan-worshipping paedophiles who drink the blood of their victims. The first QAnon posts appeared back in 2017, but the ideology has gained enormous traction during the COVID-19 pandemic in both the USA and Germany. An international comparison reveals that after the USA, the most QAnon followers can be found in German-speaking countries.

“Querdenker”

In this context, the term “Querdenker” (literally “lateral thinker”) refers to followers of the “Querdenken” movement, which originated in the area around Stuttgart and organises protests against pandemic restrictions. The movement now has regional branches around the country, some of which are under observation by constitutional protection authorities as a result of their proximity to the right-wing extremist scene.

Telegram

Telegram is a messenger service that was founded in 2013 by the Russian tech entrepreneur Pavel Durov. It advertises itself as a secure communications platform that cannot be tapped by governments, particularly those in authoritarian countries, but it is now also used by extremists and conspiracy theorists.

Conspiracy theories

Conspiracy theories are attempts to explain events or the current state of the world based on conspiracies that typically centre around a small group of individuals with allegedly sinister intentions. Unlike actual conspiracies that can be researched, there is no empirical evidence for conspiracy theories. They often build on existing stereotypes (e.g. antisemitic prejudice) and typically make unfalsifiable claims.

Introduction

The ongoing COVID-19 pandemic has propelled the topic of vaccines to the centre of public life and discourse in Germany. Debates on how necessary and effective vaccines really are have gained importance, fuelled by the unprecedented speed with which the vaccines against the novel coronavirus have been developed and certified for use. At the same time, an increase in uncertainty and economic hardship as well as social distancing mandates have been accompanied by a growing desire for straightforward explanations to the ongoing pandemic and the rapid development of the vaccines¹. One purported response comes in the form of a growing number of conspiracy theories, which are riddled with misinformation. Their authors, who range from right-wing extremists and esotericists to hard-core conspiracists, use them as highly fertile soil for sowing the seeds of discord and taking advantage of pre-existing fears. They claim that the vaccines are creating a “two-tier society” or a “COVID dictatorship”, or are even part of a “plandemic” aimed at decimating the population. The outcome? A permanently divided society.

For the first time, this report by *ISD Germany* offers a comprehensive insight into the digital networks used by vaccine sceptics in Germany. Over 400,000 posts by more than 1,000 users on *Facebook*, *Twitter*, *Instagram* and *Telegram* were collected from 21 December 2020 to 5 April 2021. The main insight is clear; targeted attempts to influence the public vaccine debate are succeeding at least in part. Despite the fact that they are often based on misinformation, the positions of the anti-vaxxers are becoming more and more mainstream.

The topic of public healthcare has become a gateway and incubator for conspiracy theories, right-wing extremism and anti-vax sentiments. Over the period between April 2020 and April 2021, the number of followers of relevant *Facebook* pages grew by an average of 21% to a total of over 4.5 million followers - a trend that also reflected on other platforms. This growth, and the extensive reach of disinformation that goes along with it, represent a major risk to democracy in Germany in both the medium- and the long-term.

All of the actors and channels that we investigated were united by a single trend; their popularity had grown massively over recent months. Overall, the number of members in the monitored *Facebook* groups increased

by 28% over the past year, and the number of followers of monitored *Instagram* channels increased by as much as 189%. A similar upward trend can also be observed on *Telegram*. This development goes hand in hand with the constant efforts of the leading figures on these scenes – from “Querdenker” to right-wing extremists – to build a network by cross-referencing each other in order to create an illusion of scientific credibility. Although ideological diversity exists within this network, the boundaries with general conspiracy theories and extremist ideologies are fluid.

Links with groups that focused on other topics such as migration or homeopathy in the pre-pandemic era result in mutual entryism into the digital and analogue world. Protests by COVID-19 opponents and deniers are attended by those with concerns and fears for the future, but also by esoteric thinkers, anti-vaxxers, right-wing populists, right-wing extremists, left-wing extremists and anti-Semites, as well as those who fall under several of these categories. “Querdenker” protests in cities across Germany have demonstrated how widespread the fear of a “dictatorship,” “coercive control” and a “New World Order” is across society. Groups that focus on individual regulatory issues often overlap and merge with larger, anti-democratic world views in this way.

At the same time, the data make it clear that the overarching narratives relating to COVID-19 and vaccines are interpreted very differently by different communities. In the medical misinformation community, the content builds on established narratives in which diseases are relativised and the body’s own healing power is overstated. In contrast, conspiracy theorists build on known narratives of secret elites and world domination plans, of which the pandemic and the vaccines are merely one chapter. Discussions within right-wing extremist groups focus in particular on whether the pandemic and pandemic mitigation strategies can be used to mobilise and recruit supporters, as well network within and infiltrate the other communities referred to above. The fact that members of the “COVID opposition” do not utilise pre-pandemic narratives shows that they stay abreast of the latest developments.

In terms of content, clearly distinguishable narratives that are aimed at achieving the greatest possible loss

of trust in vaccines and politics can be identified. The first of these is the overarching narrative that the various COVID-19 vaccines have resulted in numerous deaths; this narrative played a particularly central role throughout the entire observation period (almost 16% of all posts). In posts falling under this category, anti-vaxxers repeatedly referenced reports on the fates of individuals who allegedly died after being vaccinated or whose relatives suspect that their cause of death can be attributed in some way to vaccination,² with the aim of deliberately stoking fear.

In addition to diligently sharing stories, these actors also question official statistics and death toll numbers, and amplify concerns about serious side effects. Reference is repeatedly made to alleged “vaccine damages,” i.e. long-term effects and infertility. Readers walk away with the impression that the side effects of the vaccines are more dangerous than the virus itself. Past statements by politicians are also quoted at times out of context in order to stir up fear that vaccination will be made mandatory (either directly or indirectly). Online misinformation therefore has real impacts in terms of the population’s vaccination intent.

Besides social acceptance of the vaccine in the broader sense, another topic that sparks debate among coronavirus sceptics and anti-vaccination “activists” is the alleged loss of fundamental rights of the unvaccinated and the resulting “two-tier society.”

A related subdivision can also be identified in the distinction between those alleged to be “non-Big Pharma experts” and “pro-government scientists.” The first group is made up mainly of individuals who regard vaccines as either unnecessary or dangerous, while the second includes scientists who support the respective government’s vaccination programme. This opposition gives rise to the most popular “boogeymen”, who include Prof. Dr Christian Drosten (head virologist at Berlin’s Charité hospital), Prof. Dr Lothar H. Wieler (President of the Robert Koch Institute (RKI)), and Prof. Dr Karl Lauterbach (SPD politician and health expert). Anti-vaxxers refer to these individuals as “experts” using scare quotes, and call their academic qualifications or impartiality into question.

In particularly extreme cases, vaccines are even described as weapons of depopulation or means of

genocide. According to one disinformation website, for example, a former Pfizer employee had apparently stated that the COVID-19 vaccines would result in “massive depopulation”. This narrative is often linked to major conspiracy theories concerning the “Great Reset,” “Agenda 2030” and the “plandemic.” These theories claim that the vaccine is designed either to reduce population levels, reboot the economic system or kill off the elderly in order to ease the pressure on pension funds.

Although it is difficult to draw causal conclusions about the interplay between online narratives and the analogue world, the report’s findings suggest that acts of aggression such as the arson attack on the RKI in October 2020³ or threats against scientists and politicians⁴ have their roots at least in the spread of disinformation on social media, and perhaps even in concrete calls to action. Demonstrations have become increasingly violent,⁵ and many of them are also organised, managed and advertised via these platforms.

In parallel to these developments, the first few months of 2021 were marked by a steady loss of trust in political institutions and the healthcare system. This underlines the crucial risks posed by the current crisis for social cohesion in the long term; rising societal polarisation, a definitive split between sections of the population that are already barely integrated into political life, and a disillusioned political centre that is rapidly losing its trust in politics. In the medium-term, disinformation and distrust undermine processes such as the formation of political will and political decision-making, whereas in the short-term they represent significant stumbling blocks, in particular to vaccination efforts and other pandemic mitigation measures.

Against this backdrop, many different questions are raised for healthcare institutions, politics and society as a whole. How should we as a society deal with the existence of a minority that is disillusioned by political decision-making processes and established healthcare institutions? How can politics encourage these people to put their trust back in the democratic system and the effectiveness of vaccines? What kind of messaging is most appropriate and successful when communicating with this increasingly radicalised

minority, and who has a credible voice? What kind of impacts in terms of the acceptance of political measures and vaccines against other diseases will we see in the future as a result of networking between these actors?

Although this report cannot provide a definitive answer to all of these questions, it offers a valuable overview of the situation concerning the anti-vax movement and vaccine scepticism in general, and is therefore intended to counteract the increasing polarisation of society and vaccine scepticism.

Main findings

- The channels observed by *ISD* that disseminated vaccine disinformation over the year between April 2020 and April 2021 increased their follower counts on *Facebook* pages by 21.2% and on *Facebook* groups by 28.5%. The growth was even more marked on *Instagram*, where follower counts rose by 189%. The audience of the various *Telegram* channels increased by up to 471%. This **rise in follower counts was particularly evident across all platforms** at the start of the pandemic, following the announcement of the second partial lockdown and after the suspension of the *AstraZeneca* vaccine. More and more people are obtaining their information from channels that spread disinformation. The number of followers on all of the *Facebook* pages observed increased to over 4.5 million between April 2020 and April 2021 (multiple memberships were counted as one).
- *ISD* identified **six main narratives** shared with unusual frequency within the communities that were investigated. Using the relevant lists of keywords as a basis, we identified the proportions of the data set accounted for by these narratives. It was also possible for individual posts to be assigned to multiple narratives.

1. “Vaccine deaths”

Around 16% of all vaccine-related posts contained discussions about deaths that are alleged or proved to be linked to vaccines⁶. Although these discussions remained relatively constant over the observation period, a number of fluctuations are apparent. Vaccine deaths were

mentioned relatively infrequently up until late December 2020, or in other words the start of Germany’s vaccination programme. The number of discussions that can be categorised under the heading of the “vaccine deaths” narrative increased in mid-March 2021, when a link was identified between the *AstraZeneca* vaccine and cases of cerebral venous sinus thrombosis.⁷ This scientific finding was interpreted by the actors as evidence that all vaccines were unsafe. The flood of ever-changing information and messaging about *AstraZeneca* led to a high level of uncertainty among the population, which was exploited in a targeted manner by disinformation agents.

2. *AstraZeneca*

Almost 9% of all posts about vaccines contained references to the *AstraZeneca* vaccine, with a marked peak in discussions on this topic in early March 2021. Alongside targeted disinformation, the proportion of misinformation, or in other words statements that are based on reality but taken out of context and spread with the intention of doing harm, is particularly high in this area.

3. “Vaccine damage”

Around 8% of all posts contained discussions on “vaccine damage.” As in the case of “vaccine deaths,” this narrative emerged early on in the pandemic and saw a burst of growth in early 2021. The proponents warn in particular about long-term harm and infertility, and it is claimed that the side effects of the vaccines are more dangerous than the virus itself.

4. “Mandatory vaccination”

One out of 10 posts contain references to alleged plans for “mandatory vaccination” or even “forced vaccination” against COVID-19. Significant fluctuations in this narrative were seen over the observation period; most of the posts in the data set relating to “mandatory vaccinations” were made on 3 February 2021, after the event and ticket agent *Eventim* called for legal regulations allowing private undertakings to insist on vaccination as a condition for entry to large-scale events (as soon as sufficient vaccine stocks were available). Federal Chancellor

Angela Merkel also said in an interview with *ARD* on 2 February 2021 that although “mandatory vaccinations” were off the table, non-vaccinated people may well experience restrictions.⁸ A spike in activity can also be observed on 25 February 2021, when the EU announced its plans for a joint vaccine passport.⁹ Most recently, the narrative saw renewed interest on 4 April 2021, when Jens Spahn (the German Health Minister) announced relaxing measures for the fully vaccinated.¹⁰

5. Discrediting of experts

Around 9% of the posts that were collected contain hostility against and attempts to discredit scientists and doctors who support the vaccination programme and government health regulations. This narrative has remained constant over time, with two outliers; in mid-March, and especially following the suspension of the *AstraZeneca* vaccine, there was a marked increase in use of the “indoctrinated scientists” narrative. This narrative framework can also be categorised as a driving force behind the loss of trust in health institutions and politics. It was around this point in time that certain users claimed that the side effects of the *AstraZeneca* vaccine had been correctly predicted by prominent critics belonging to the movement; this gave them an increased in supposed credibility, particularly among anti-vaxxers.

6. Conspiracy theories

In addition to medical disinformation, our data set also contains broader conspiracy theories relating to the financial or political interests that are allegedly behind the vaccination programme. Almost 12% of all posts related to theories of this kind. This narrative showed less evidence of chronological development than the narratives referred to above; myths about sinister elites, secret plans and “Big Pharma” appear to depend less on current events.

- There is evidence of **increased networking between the actors** and their channels. Many of the key websites that were shared most frequently by the accounts that we analysed can trace their background to the right-wing extremist

scene. Others had already focused on medical disinformation for many years prior to the pandemic, and have taken it as an opportunity to spread their content.

- QAnon followers, right-wing extremists, self-appointed critics of the system and anti-vaxxers are using the pandemic as a springboard for leveraging the uncertainty of the population and aligning new followers to their own agendas and platforms in the longer term. Once a foundation of trust has been built, other disinformation posted by the actors in question will seem more appealing and will spread through the digital world.
- **Calls to action** play an important role in building loyalty among users to respective channels. Additionally, it is also prominent to see calls to attend demonstrations and to watch countless real-time live streams on *YouTube*, *Facebook*, *Instagram* and *Telegram*; calls to violence against journalists, police officers, politicians and minorities are also made. The increasingly violent language of these posts has led to eruptions of violence at demonstrations, particularly in Kassel and Stuttgart; online violence has offline consequences, and attitudes are becoming more entrenched. Besides these calls to violence, followers are also told to “resist” by means of offline actions such as distributing flyers and stickers and boycotting schools and shops. Distributing flyers and stickers is not a problematic act in and of itself, but if the content contains disinformation or calls to violence, this can promote polarisation and a readiness to use violence. Individual actors are also using the pandemic to enrich themselves financially through the sale of clothing and other merchandise.
- Certain channels operate as **gateways for disinformation**; for example, disinformation is also shared on *Facebook* groups that are not at first glance related to vaccines or the pandemic. Links to anti-vaccine channels on *Facebook* and *Telegram* are repeatedly posted on these groups in order to attract new followers.

Research design

A *mixed methods* approach was chosen for the analysis, combining ethnographic analysis with automated textual analysis of large data sets for the purpose of identifying and analysing the spread of vaccine disinformation online.

All of the data was collected between 21 December 2020 and 5 April 2021. The start of this period coincided with Germany’s first approval of a COVID-19 vaccine (*BioNTech*) on 21 December 2020. **In total, ISD investigated 4,777,029 posts during this period by 1,108 accounts on four different platforms: Twitter (2,066,755), Telegram (1,863,251), Facebook (838,406) and Instagram (8,617).** The data was sorted and filtered using keywords in order to focus the evaluation on vaccine-related posts and messages. Overall, 1,042 unique accounts were identified on this basis; during the observation period, these accounts shared 416,706 posts and messages that related directly to the topic of vaccination. This filtering stage was essential given that a number of the actors and channels post content on a number of different topics. In the next stage, the most prominent narratives within the data set were identified and their development over time was tracked.

The various narratives are shown in Table 1:

Narratives	Number of posts	Share of total posts (in %)
„Vaccine deaths“	66,255	15.90%
Conspiracy theories	50,664	12.16%
„Mandatory vaccination“	43,543	10.45%
Discrediting of experts	38,936	9.34%
AstraZeneca	38,590	9.26%
„Vaccine damage“	34,165	8.20%
BioNTech	32,980	7.91%
Moderna	6,293	1.51%

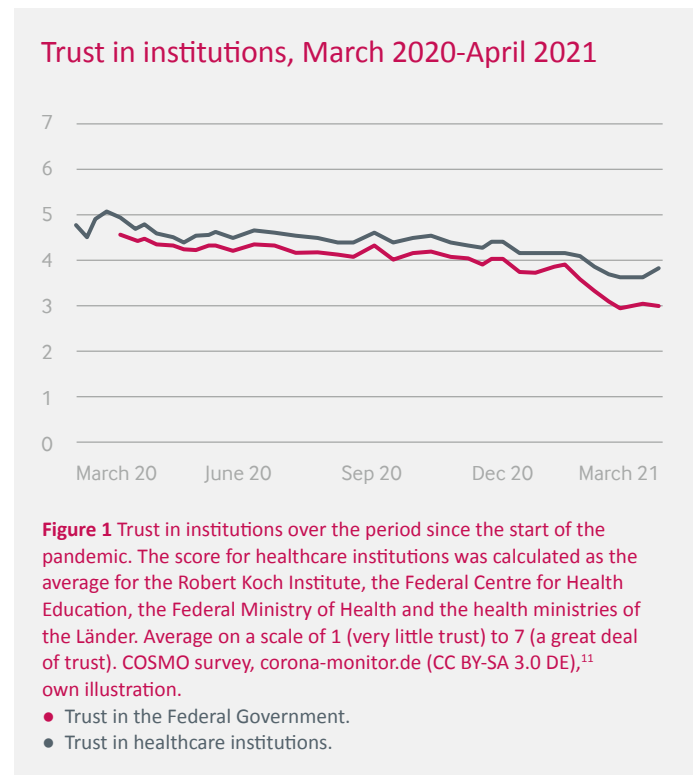
Table 1 List of narratives with the number of posts per narrative.

The posts were also evaluated in qualitative terms and assigned to ethnographic categories, with particular emphasis placed on the networks and backgrounds of the actors. In February and March 2021, a total of 14

experts from the healthcare sector and from the fields of science, education and communications were interviewed to better evaluate the analogue impacts of vaccine disinformation. A detailed explanation of the methodology and the lists of keywords that were used can be found in Annex A.

Starting point

Crisis management and reporting



Trust in the government

Trust in the Federal Government initially rose but then dropped steadily – albeit slowly – over the course of 2020.¹² In 2021, however, a more rapid loss of trust could be observed from the second week of February and onward, and trust values only stabilised again at a comparatively lower level in late March. According to the University of Erfurt’s COSMO COVID-19 Monitor, only 30% of the adult population feels able to trust in the crisis management measures taken by the Federal Government to tackle the coronavirus.¹³ At the same time, trust also dropped in authorities such as the Federal Ministry of Health and the Ministries of Health of the *Länder*.

Trust in the media and their COVID-19 reporting

According to an *Infratest dimap* survey carried out in October 2020, the vast majority of the population trusts the public-service broadcasters and their COVID-19 reporting (trust ratings of around 80% for both). However, over one-third of citizens believed that the media was toeing the government line.¹⁴ This view is more widely held in the *Länder* of the former East Germany than in those of the former West Germany. What is more, at times, one in five Germans believed that politicians and the media had deliberately overstated the risks associated with COVID-19 in order to influence public perceptions.¹⁵ In addition, according to a recent survey by the University of Erfurt, almost half of the population believes that the pandemic has been “overblown by the media.”¹⁶

Health

Trust in healthcare institutions

Doctors continue to enjoy the highest trust ratings among the German population. Although trust ratings for hospitals are lower, they have remained relatively stable among the population over the course of the pandemic. According to the COSMO survey, the trust ratings for health authorities are the lowest of any entity in the healthcare sector.¹⁷ On a scale of 1 (very little trust) to 7 (a great deal of trust), approval ratings for doctors are consistently over 5 and those for hospitals around 5, whereas health authorities were scoring over 4.5 in some cases at the start of the pandemic but have since dropped to below 4.

Vaccination intent

Let’s start with the good news; according to a survey carried out by the University of Erfurt in March 2021, willingness to be vaccinated against the SARS-CoV-2 pathogen has remained comparatively stable in Germany with an approval rating of around two-thirds of those surveyed, in spite of the suspension of the *AstraZeneca* vaccine.¹⁸ According to a study carried out by the polling agency *Ipsos* in February 2021, COVID-19 vaccination intent stands at 74% in Germany, placing the country in the upper mid-range of an international ranking. Vaccination intent is as low as 42% in Russia, 59% in France and 65% in the United States, but as high as 85% in Italy, one of the frontrunners in this area. Broadly speaking, the last survey carried out by *Ipsos*

Vaccination intent April 2020–April 2021

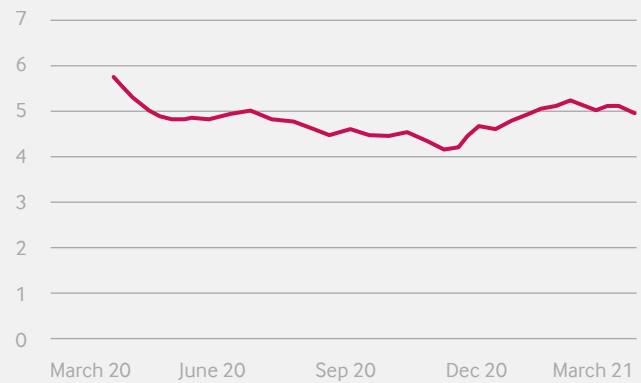


Figure 2 Vaccination intent over time. Average on a scale of 1 (would not be vaccinated under any circumstances) to 7 (would definitely be vaccinated). COSMO survey, corona-monitor.de (CC BY-SA 3.0 DE), own illustration.

● Vaccination intent.

in December 2020¹⁹ showed that approval ratings had increased sharply, in spite of uncertainty about side effects and suspended approvals, both in Germany and around the world. Trust ratings for the *AstraZeneca* vaccine had however dropped dramatically among those surveyed for the COSMO study (23 March 2021). Around 42% of respondents believed that there was a high likelihood of suffering serious side effects if they received this vaccine.²⁰

This reveals that vaccination intent for SARS CoV 2 is in fact high compared to vaccination intent for influenza. For example, flu vaccination rates among high-risk groups were alarmingly low in the 2018/2019 flu season (only around 35% among older people). It is assumed that vaccination rates will be significantly higher in the 2020/2021 flu season, although flu levels were unusually low over the past winter, perhaps due to the current social distancing measures. Nevertheless, it is likely that this season will once again be marked by a failure to achieve the EU’s goal of vaccinating 75% of over-60s.²¹

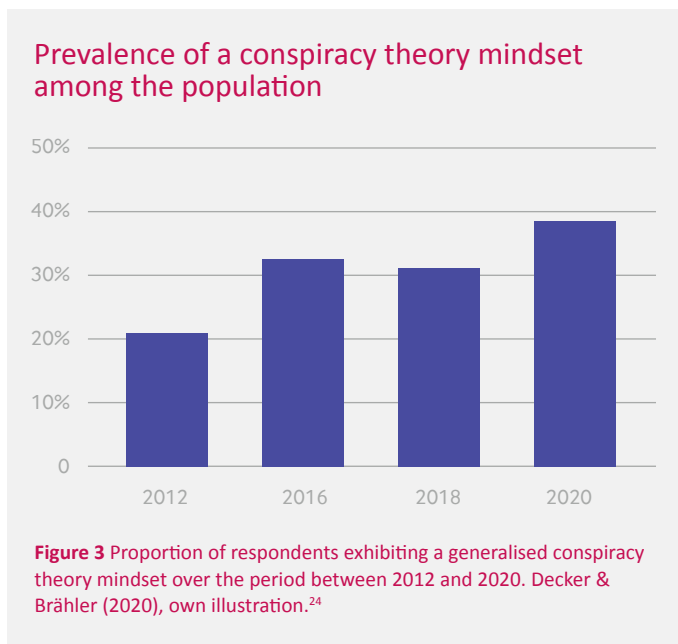
A comparison of COVID-19 vaccine acceptance to ratings of acceptance for other vaccination programmes such as the measles programme for children (97%) or diphtheria, tetanus and pertussis (93%) reveals that the former were significantly lower.²² Interpretation of the figures is therefore

context-dependent, but one thing is sure; levels of COVID-19 vaccine scepticism have sadly exceeded last year's numbers.

Vaccine scepticism in Germany

Two main groups of vaccine sceptics can be identified in Germany; staunch anti-vaxxers who are categorically opposed to vaccinations and account for only around 2-5% of the population, and hesitant vaccine sceptics.²³ The former anti-vax community primarily targets the population at large with its content, and deliberately tries to sow uncertainty. By way of contrast, vaccine scepticism in Germany can be attributed to two factors in particular; support for alternative medicine, and a marked propensity for conspiracy theories.

Conspiracy theory mindset



The majority of conspiracy theories are based on the belief that politics and society are controlled by powerful individuals operating in secrecy. Various studies have found that almost one in every three Germans identifies with a “conspiracy theory mindset” of this kind. According to a 2020 study on authoritarianism by Decker et al., this figure is even higher and covers 38% of respondents (Figure 3). A similar result emerged from the *COSMO* survey in March 2020, where 17% of respondents said to believe

that coronavirus was “manmade” or a “hoax.” A full 10% of respondents believed both conspiracy theories.²⁵ In a study by Osnabrück University, one out of ten people identified with the “Querdenker” community.²⁶ These views correlate positively with a general conspiracy theory mindset and negatively with a willingness to comply with rules. According to estimates, over 150,000 people in Germany are followers of QAnon conspiracy theories,²⁷ and three of the ten most active QAnon *Facebook* groups in December 2020 were German-speaking.²⁸

Alternative medicine²⁹

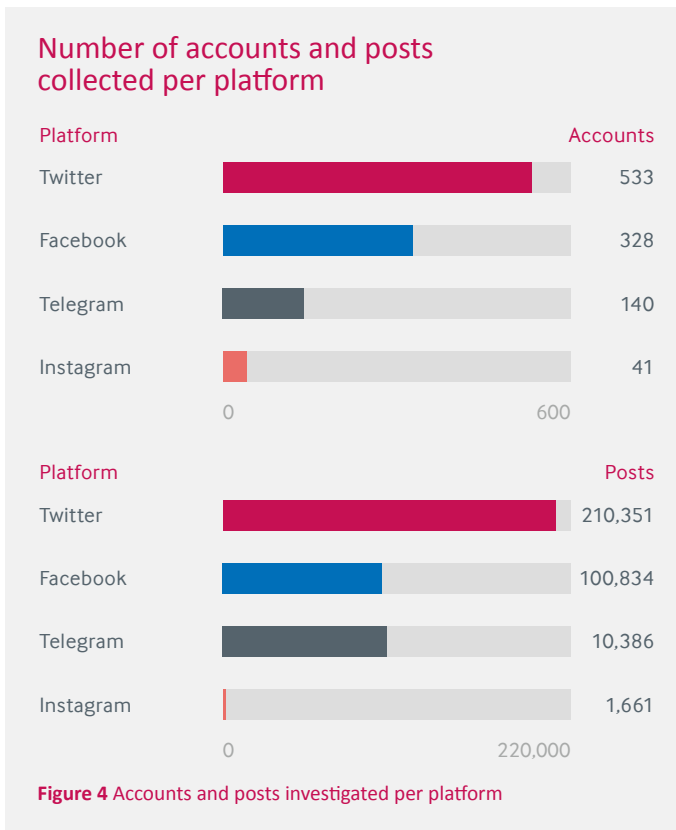
According to a Forsa survey carried out in April 2020,³⁰ approval ratings for alternative medicine, in particular homeopathy, are between 50% and 60%. The combination of these two attitudes – a conspiracy theory mindset and support for alternative medicine – represents the greatest risk to the success of the vaccination programme. Fans of alternative therapies often refer to science-based medicine disparagingly as “mainstream medicine” and actively undermine claims to validity. Concurrently, conspiracy narratives frequently accuse “mainstream medicine” of having malicious intentions, of being in thrall to the pharmaceutical industry and of financial and ideological agendas. This strengthens the supposed plausibility of anti-vax views.

Research results

Actors and their networks

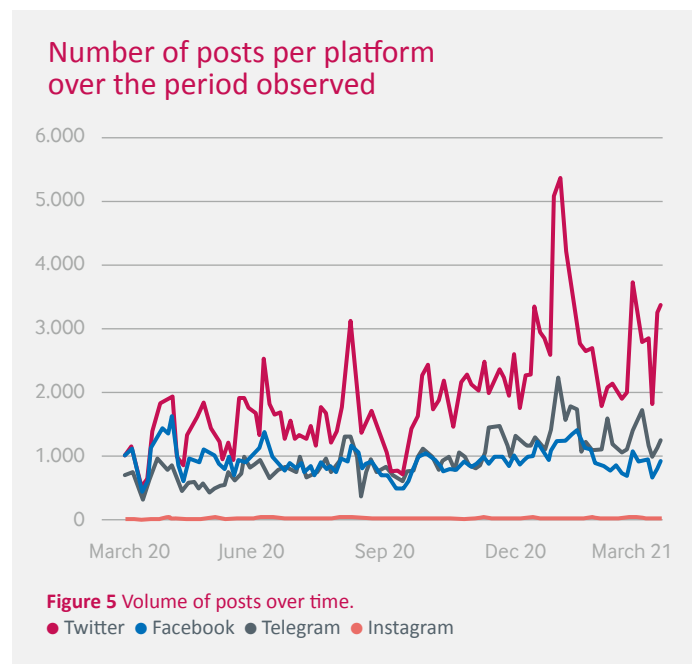
Most active and most followed accounts

The analysis encompassed the investigation of 533 *Twitter* accounts, 328 *Facebook* pages and groups, 140 *Telegram* channels and 41 *Instagram* pages. The ratio between the number of accounts and the quantity of posts per platform underlines the growing relevance of *Telegram* as a platform for communication. A disproportionate level of activity is displayed by a small number of accounts; one quarter of all posts investigated appeared on *Telegram*, although *Telegram* channels only account for 13% of the accounts observed. The opposite is true on *Facebook*; one-third of the accounts observed are *Facebook* pages and groups, but they account for only 24% of posts. In concrete figures taken from the investigation, one *Telegram* channel made an average of 740 posts, whereas only 307 posts were made per account on *Facebook*. The average *Telegram* channel is therefore more than twice as active as the average *Facebook* account.



The growing importance of *Telegram* compared to other platforms can also be seen in qualitative terms. Figure 5 shows the changes over time in the number of daily posts per platform, and reveals that at the end of February *Telegram* overtook *Facebook* as the medium with the second largest volume of posts. The volume of messages on *Twitter* was 100% higher, however (210,351 posts over the period in question, or 1,984 posts per day), meaning that it remained the most relevant platform. Particular peaks in the volume of posts were observed when the events and ticket agent *Eventim* called for a vaccine passport for large-scale events on 3 February 2021, and six weeks later, on 15 March, when the *AstraZeneca* vaccine was suspended.

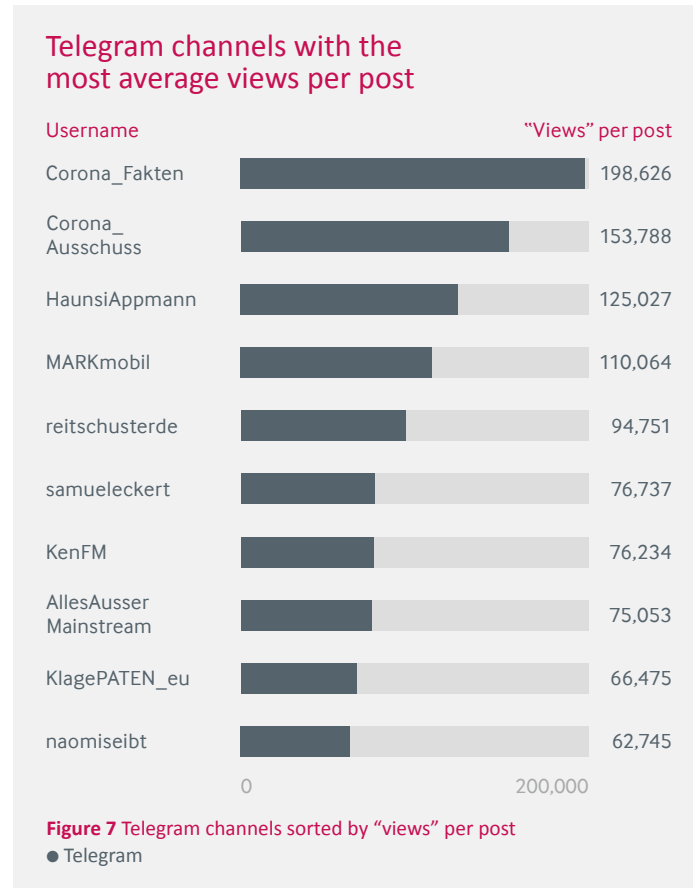
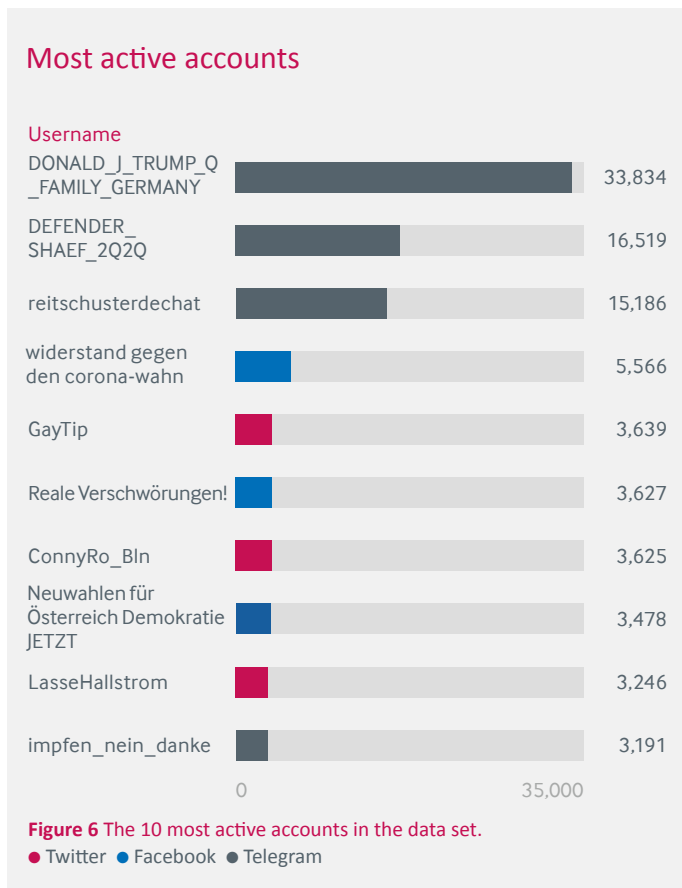
The three most active accounts are all *Telegram* channels. Two of them fall within the sphere of influence of the German-speaking branch of the QAnon movement. These channels describe themselves as relating “specifically to the military rescue action of Germany and Europe by the Allies.” The QAnon accounts are therefore using the **pandemic as a springboard** to disseminate other conspiracy theories. The third channel is not a QAnon channel, but the “official” chat channel for Boris Reitschuster’s website. In 2015, the former Russia correspondent for *Focus* left his previous employment, citing “differences in opinion” as his reason for doing so. Since then he



has worked as a freelance journalist for publications including “Tichys Einblick” and “Junge Freiheit.” The articles he publishes on the domain www.reitschuster.de typically take a critical stance towards the Federal Government and the pandemic mitigation measures. In addition, many of his articles criticise the mainstream media in Germany or the alleged suppression of dissenting opinions.

However, the level of activity is not the only crucial indication of how influential an account is within the community. If the channels are sorted according to average “views” per posts, the top channel is a Telegram channel with approximately 200,000 “views” per post. This channel has almost 90,000 followers and shares posts on topics relating to the COVID-19 pandemic. Conspiracy theories also repeatedly make an appearance. The “Corona Ausschuss” channel is in second place with over 150,000 views per post; it belongs to the “Stiftung Corona Ausschuss,” a website set up in July 2020 that uses its name to sound professional.

The channel with the highest number of shared posts on Facebook is the Swiss conspiracy portal “klagemauer.tv”, averaging over 4,000 shares per post. This online broadcaster was founded by Ivo Sasek and is headed up by his son, Elias Sasek. Ivo operates as a preacher and is also the founder of the “Organic Christ Generation,” which has been described by experts as a sect. He also founded the “Anti-Censorship Coalition,”³¹ whose website hosts videos and disseminates content on a wide range of conspiracy theories (e.g. the “Great Reset”, “global surveillance”, antisemitic narratives, 5G conspiracies and many more). Since October 2020, it has been visited 333,000 times per month on average.



Facebook and Twitter accounts with the most average shares per post

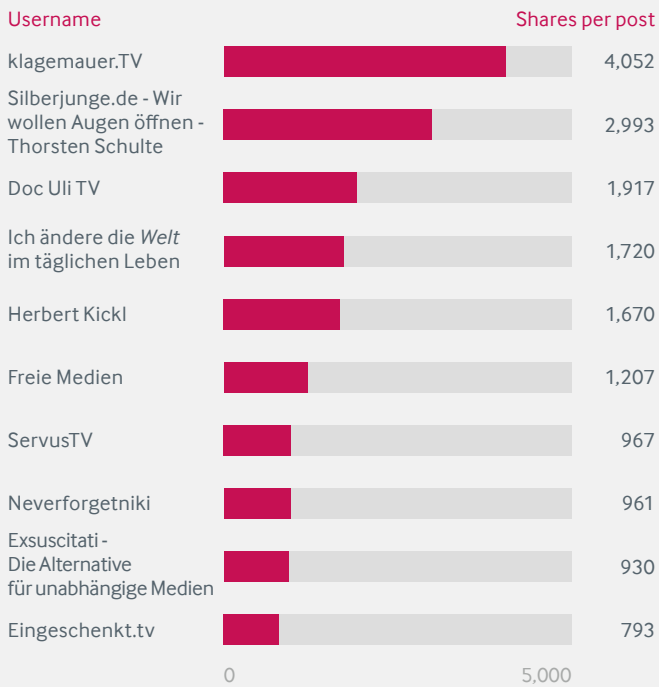


Figure 8 Facebook and Twitter accounts sorted by shares per post.

Account and domain networks

In order to identify the websites that influenced public discourse on the topic of vaccines, the *ISD* team analysed all of the links that were included in the posts that had been collected, and aggregated these links at domain level³² as a basis for singling out the most-shared domains.

A network map was also produced, in which the actors were connected to the domain links they shared. The resulting network was filtered to obtain only those domain links that were shared at least 100 times by the actors in the data set. The resulting data were then plotted algorithmically on the basis of the frequency of their connections. This resulted in a community cluster that can be used as a basis for assigning actors with similar behaviours to different communities.

The larger a node appears on this visualisation, the more connections it was found to have. The different colours stand for the different community clusters identified by the algorithm. Larger nodes are domains

that are linked to nodes of actors. Each line or edge is a shared URL that connects a protagonist and a web domain.

Cluster 1: "Coronavirus critics"

The majority of the accounts investigated belong to the "coronavirus critics" cluster and can be assigned to different ideological sub-groups, such as the QAnon movement, the "Alternative for Germany" party and small groups aimed at resisting an alleged "coronavirus dictatorship." A connection is not necessarily evidence of networking activity between the actors; it merely shows that they often cite the same sources.

The domains that are frequently shared by the "coronavirus critics" cluster cover a broad spectrum of topics. Some of these websites were set up during the pandemic, and report almost exclusively on it. Their primary focus is criticising the pandemic mitigation measures, creating or exacerbating worries about COVID-19 vaccines and spreading disinformation about SARS-CoV-2. For example, the "Stiftung Corona-Ausschuss" website asserts that SARS-CoV-2 is no more dangerous than the flu in terms of its "transmissibility, burden of disease and mortality."³³ The website operators also ask for donations but (according to their own FAQs) cannot issue receipts for them, which suggests that they are not registered foundations.³⁴

Another striking fact is that the domains that are shared frequently also contain numerous links to media portals that have drawn attention to themselves for several years as a result of the content they disseminate. Many websites that were already regarded

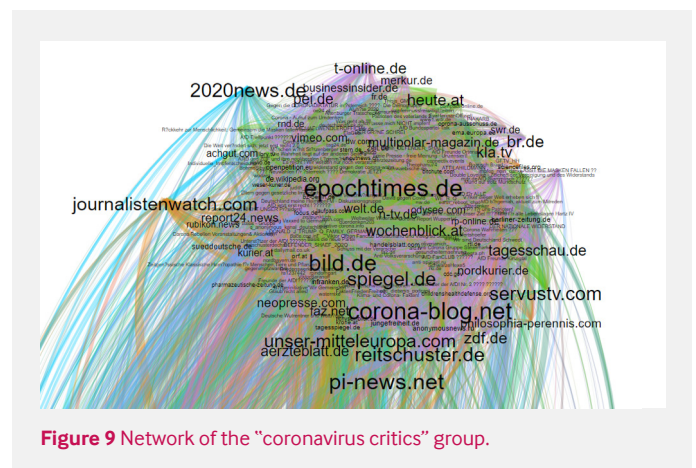


Figure 9 Network of the "coronavirus critics" group.

as right-wing radical and conspiracy portals even before the pandemic have reported enthusiastically on the COVID-19 pandemic. Once again, these reports typically focus on criticising pandemic mitigation measures, sowing doubt about vaccines and spreading misinformation.

Cluster 2: “Alternative media”

Actors within the “alternative media” cluster are particularly likely to include links to the German-language service of the Russian broadcaster RT, which has been the object of criticism in many countries and accused of broadcasting propaganda, one-sided reports and deliberate disinformation.³⁵ Other websites that are often linked to by this cluster noticeably often include a website with links to the Freedom Party of Austria and a news site where highly sententious content on economics and politics has been published regularly since 2011. The news portal was visited around one million times on average over the past six months, and its amplified content often captures the zeitgeist in an era in when conveying cogent arguments has become a significant challenge.³⁶



Figure 10 Network of the “Alternative media” group.

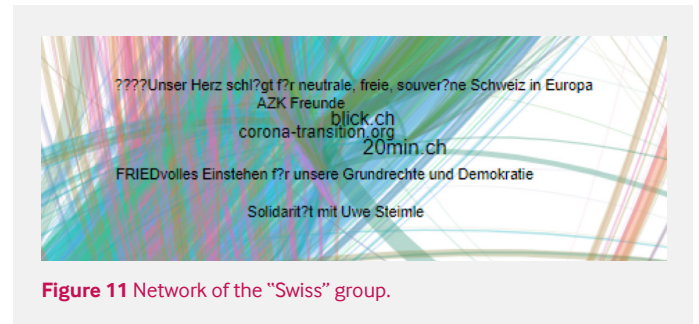


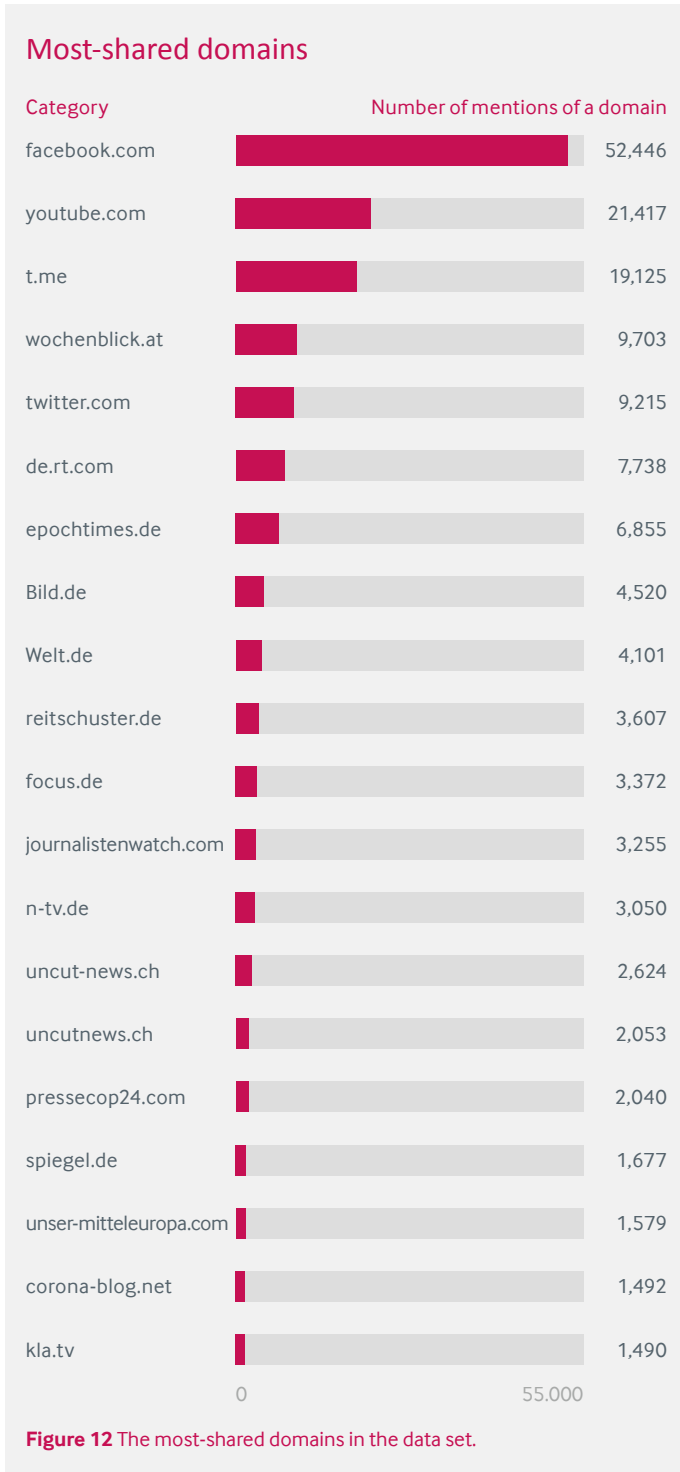
Figure 11 Network of the “Swiss” group.

Cluster 3: “Swiss media”

This cluster is characterised by strongly localised links to Switzerland. The *Facebook* groups assigned to this network include a supporter group for the “Anti-Censorship Coalition” platform founded by Ivo Sasek. Its members have been criticised for their use of antisemitic, homophobic and anti-democratic speech during rallies.³⁷

Websites that are frequently linked to within this network include not only the online presences of the two highest-circulating daily newspapers in German-speaking Switzerland (“20 Minuten” and “Blick”),³⁸ but also the Swiss website “corona-transition.org”. This website was visited 540,000 times in March 2021; according to its legal notice, it is operated by the “Corona Reset” association, which was founded by Christoph Pfluger, a journalist and COVID sceptic.³⁹

Most-mentioned domains and links in the data set



The three most-mentioned domains in the data set belong to the social networks *Facebook*, *YouTube* and *Telegram*. The content posted on these platforms serves mainly as source material and advertising space for the respective channels. The most-shared domains also include disinformation portals such as “*Wochenblick.at*”; 58% of the readers of this portal – which has links to the Freedom Party of Austria – are in Germany.⁴⁰ The German-language versions of the Russian state broadcaster *RT* and the *Epoch Times* are also often mentioned. Links to the website of the journalist Boris Reitschuster were posted over 3,600 times. The domains also include explicit conspiracy portals and right-wing populist websites.

Mainstream media

The domains include more than just alternative media outlets. The daily newspapers published by the Springer-Verlag publishing house (*Bild* and *Welt*) and the magazines *Focus* and *Der Spiegel* are also frequently mentioned. Although the actors in our data set are typically hostile to or at least sceptical about the media they refer to as “mainstream,” they nevertheless share articles published by these outlets that support their world view. Two examples of this phenomenon can be provided. First, in an article published on 31 January 2021 with the headline *NTV*:



“China states that the *BioNTech* vaccine causes lethal side effects.”⁴¹ This article was shared hundreds of times within the groups in our data set, often without any comment, and interpreted as evidence of the dangers associated with the vaccine as a result of its misleading headline. Contrary to the headline, however, the article itself does not analyse the alleged dangers of the *BioNTech* vaccine; instead it discusses Chinese state propaganda against foreign vaccines.

According to a study carried out in 2016, almost 59% of links shared are not read but merely shared on the basis of their headlines;⁴² in this particular case the NTV editorial team – presumably without intending to do so – helped to boost the disinformation narratives that warn about the fundamentally dangerous nature of COVID-19 vaccines.

The second example relates to the reports about an unlicensed vaccine that was tested on humans without an authorisation; the *Paul Ehrlich Institute* filed charges against the vaccine developer in September 2020.⁴³ *Spiegel TV* had at first reported uncritically on the Lübeck-based researcher Prof. Dr Winfried Stöcker and his vaccine development efforts, with a corresponding post dated 3 March 2021 bearing the title “The COVID tinkerer: a vaccine out of a jam jar” getting over one million clicks on *YouTube*.⁴⁴ In this video, *Spiegel TV* highlights the benefits of the antigen that was developed, describing the events as follows: “Winfried Stöcker developed a vaccine, and distinguished virologists confirmed that it was effective. Yet instead of starting production, Stöcker – a doctor and billionaire businessman – is now facing criminal proceedings. Not before vaccinating himself and all of his employees, however.” SWR criticised this reporting; the antigen vaccine [developed by Winfried Stöcker] has been reported as a “magic bullet” created by a “courageous vaccine developer” who was “thwarted” by the official authorities, and the antigen was described as a potential way out of the “vaccine chaos” in which Germany was currently sinking, but the video did not reveal how exactly this would work.⁴⁵

The *Spiegel TV* report and Stöcker’s vaccine are viewed positively by the channels within our data set. This leads to a paradoxical situation where the safety and procedural integrity of the vaccines that have been tested in line with the regulations are questioned, but

blind faith is placed in a vaccine that is known not to have been tested. This paradox can be explained by examining the framing of the posts in question; Roland Tichy dubbed Stöcker a “pharma rebel”⁴⁶, and another user heralded the collapse of the “million-dollar COVID vaccine cash cow milked by BionTech/Pfizer, AstraZeneca and the rest.” A *Focus* article criticising Stöcker and linking him to the Alternative for Germany party⁴⁸ was discussed on *Reitschuster.de*.⁴⁷ The narrative that clearly emerges for readers is that of an individual (German) hero who is pitted against “Big Pharma,” the Federal Government and the political establishment and who could save us from this crisis, but has become mired in a morass of bureaucracy for ignoble reasons.

Stöcker’s announcement that the unauthorised vaccine was to have been made available free of charge was a particular cause for approving comments, while the criminal charges brought against him provoked anger and incomprehension. A petition with (at the last count) 5,600 signatures, entitled “W. Stöcker’s COVID vaccine, fast-track approval and investigation into delays”, was blocked by the digital campaign platform “openPetition.eu”, with the following explanation; “The text of the petition suggests that Dr Stöcker has been criminalised by the state and that his efforts have been thwarted by state authorities with malicious intentions. This is a misrepresentation of the case. The rules that apply to vaccines and testing on human subjects are clear. Dr Stoecker [sic.] did not follow these rules at any time, and so he is currently the subject of investigations. He has not been criminalised; it is simply the case that the law is being applied.”⁴⁹

Group dynamics

Social media channels function as a familiar environment that strengthens trust in the content that is shared, and it has been proven that this promotes the spread of disinformation.⁵⁰ The actors posting the disinformation deliberately utilise this mechanism firstly to increase acceptance of the content they disseminate, and secondly to influence the discourse for their own ends.

While carrying out research in this area, *ISD Germany* identified a number of different moderators who deliberately shared “off-topic” disinformation in unrelated groups. Most of these posts were favourably received; a *Facebook* group that is aimed at Hartz IV

recipients (and whose name confirms this intended purpose) but has become almost entirely dominated by off-topic vaccine disinformation is a striking example. In a study concerning group dynamics on *Facebook*, Winter et al. (2015) demonstrated that as soon as one or more negative comments had been posted, other users were less likely to post positive comments or to contradict the negative comments, leading other people reading along to believe that these negative views were held by the majority. Instead of healthy disagreement, this tended to result in a process of adaptation that narrows the discourse.⁵¹

Networking, mutual entryism and right-wing mobilisation

There are a number of well-known figures within the German-speaking COVID-19 anti-vaccination scene who are in contact through social networking sites or meetings at offline events. Many of them are publishers, presenters, speakers, non-medical practitioners, or managing directors of businesses in the field of alternative medicine. Although some of them were already active within the pseudoscientific community before the COVID 19 pandemic, others only came into public view as a result of the pandemic. At the same time, long-standing anti-vaxxers appear as interviewees and speakers on new online channels and groups that were founded after the outbreak of the pandemic. A closer examination of these links reveals a densely interwoven network of conspiracy theorists, esoteric thinkers and non-medical practitioners who invite each other to events and interviews or provide each other with a platform through guest articles and publications. Some of the actors within this network come from the alternative medicine community or the esoteric scene, but other have right-wing extremist and conspiracy theory backgrounds. The large amount of overlap in terms of content and the high level of mutual tolerance for the conspiracy theories touted by other groups make it almost impossible to identify clear boundaries between the various theories within the network.

A good example of this phenomenon is the long-standing and active anti-vaxxer Hans Tolzin, who owns a publishing house that specialises in alternative medicine titles and books by anti-vaxxers. Alongside that, for a number of years he has operated several websites as a platform for his arguments against vaccines of all kinds, as well as setting up a network of

what he describes as “anti-vaxxer get-togethers.” Two other authors are listed on the *Tolzin-Verlag* website; the non-medical practitioner Thomas Bezler and the author Michael Hinz. Hinz wrote the “Kent Dispatch”, which was published under the pseudonym Michael Kent by the publishing house of his wife, Sabine Hinz; according to the constitutional protection authorities, this text has underlying Scientological leanings.⁵²

Tolzin was also asked about his views on COVID-19 during an interview on *YouTube* with Michael Langwasser, the Managing Director of Regenbogenkreis (an alternative medicine retailer). Both of these individuals sit on the “Expert Council” of the “Ich bin anderer Meinung [I am of a different opinion]” (IBAM) association, which has called (among other things) for “forced vaccination” to be rejected and for the public service media to be restructured. Other members of this self-appointed Expert Council include the doctor Rüdiger Dahlke, who owns an alternative medicine shop and holds esoteric beliefs,⁵³ and Alexandra Kleeberg, the organiser of an online congress billed as including a method of “self-healing” from cancer. Dahlke had agreed to take part in this congress.

Tolzin also appeared as a guest speaker during an event held as part of the “Coronavirus Information Tour,”⁵⁴ which was a bus tour during which alternative narratives and disinformation about COVID-19 were disseminated. Its organisers included Bodo Schiffmann, an ENT specialist and co-founder of two small parties focusing on COVID-19, Ralf Ludwig, a lawyer for the “Querdenker” movement who (according to a report by the *Nordkurier* newspaper) made a speech threatening violence against the state,⁵⁵ and Samuel Eckert, who was formerly a preacher within the Church of the Free Seventh day Adventists but was banned from speaking on the grounds of his statements about COVID-19.⁵⁶ Eckert also interviewed Jürgen Elsässer, the Editor-in-Chief of the right-wing populist magazine *COMPACT*, and Oliver Janich, who promotes QAnon conspiracies and was also filmed meeting the convicted Holocaust denier Nikolai Nerling at a demonstration.⁵⁷

This exemplary analysis is not intended to paint specific individuals as particularly influential or to suggest that the individuals who were investigated necessarily hold the same opinions. The alternative scene is no different to any other in that relationships are constantly being

nurtured, broken off or newly established. The networks described above are however a good illustration of how close the links are between the different movements – alternative medicine, esotericism and conspiracy theories – in the German-speaking countries. An investigation of these links reveals clearly that not only long-standing proponents of alternative medicine and pseudoscience, but also individuals from the right-wing fringe are utilising the COVID-19 pandemic as the ideal hotbed for various trends that are critical of the system and as a vector that helps them to spread their own world view and incite fear, gaining new followers and more influence in the process.

Not all of the actors within this environment hold radical world views, but even the more moderate critics of pandemic mitigation measures do not appear to view the expression of explicitly right-wing extremist and/or antisemitic views as a reason to break off personal or professional relations. Any criticism of the close links between moderates and radicals is dismissed as “guilt by association.” It is therefore possible that tolerance of anti-humane attitudes within the scene is attributable not only to a shared rejection of the mainstream and science, but also to more far-reaching ideological overlaps. Those who hold pseudoscientific opinions – for example, those who deny that coronavirus is a threat or claim that it is possible to heal oneself from life-threatening diseases – trace health problems back to a failure on the part of the patient (in terms of either their behaviour or their spiritual attitude). The sufferer is effectively blamed for their illness. Recourse is also made to antisemitic stereotypes such as the “dark elites” that operate covertly and as the arbiters of true knowledge they wish to keep secret, and to conspiracy narratives that set science and modern medicine up as the enemy.

Although anti-vaxxers have a considerable online presence, offline contacts continue to play an important part in this dynamic. Proponents of pseudoscience, non-medical practitioners, conspiracy theorists and also right-wing radicals and extremists often appear at joint events or interview each other, as well as setting up advocacy groups and establishing business ties. On the one hand, actors who were previously unknown have gained an outlet as a result of the pandemic, and entirely new alliances and contacts have been built; on the other hand, actors who were already established

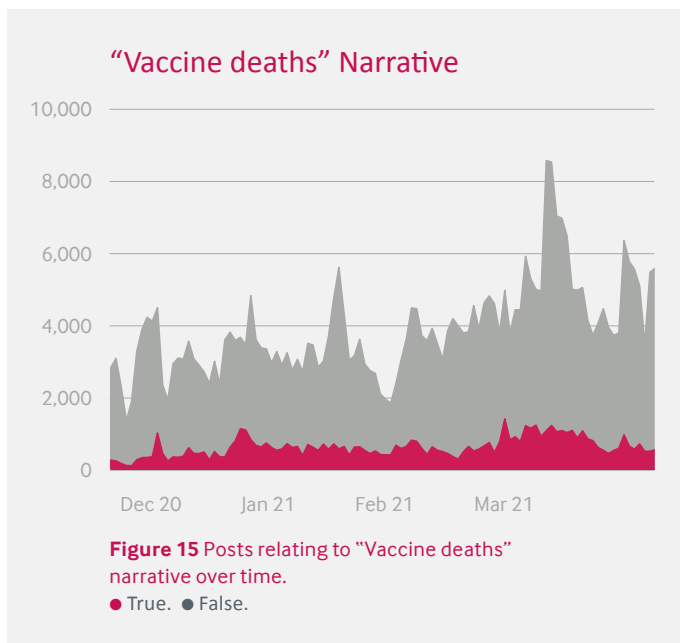
and closely networked have utilised the pandemic as an opportunity to construe the current emergency according to their preferred ideological views, thereby disseminating them to a wider audience.

Share of the different narratives in the data set

ISD identified six main narratives that were shared conspicuously often in the disinformation community under investigation: “vaccine deaths,” *AstraZeneca*, “vaccine damage,” “mandatory vaccination,” discrediting of experts and conspiracy theories.

The frequency of the different narratives can be analysed using keywords, whereby individual posts can be assigned to several different narratives.

1. “Vaccine deaths”

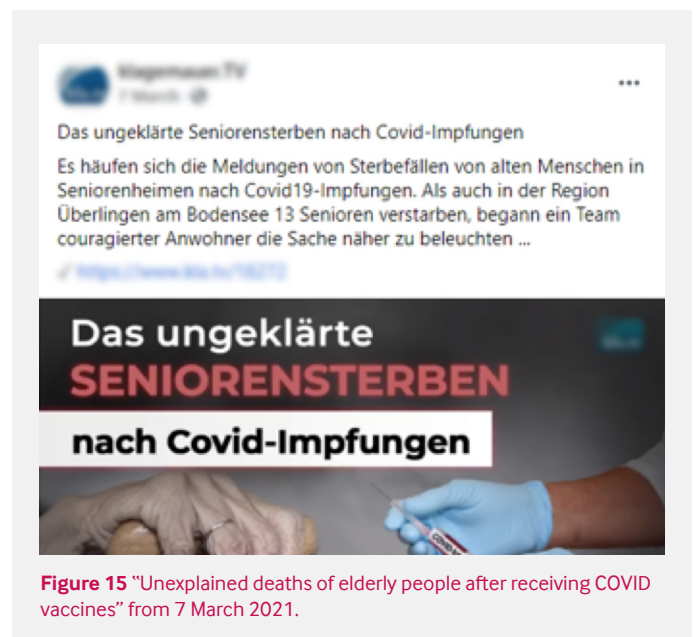


Almost 16% of all posts about vaccines contained keywords relating to deaths. Discussions relating to “vaccine deaths” were relatively infrequent in late December 2020, when Germany’s vaccination programme started, but increased dramatically over the following months. The rise in the number of discussions relating to “vaccine deaths” was particularly marked in mid-March 2021, when a link was discovered between the *AstraZeneca* vaccine and cases of cerebral venous sinus thrombosis.⁵⁸

Some of the discussions derive from legitimate concerns about serious or even fatal side effects of the different vaccines, exacerbated by the decisions of national and international drug authorities to suspend

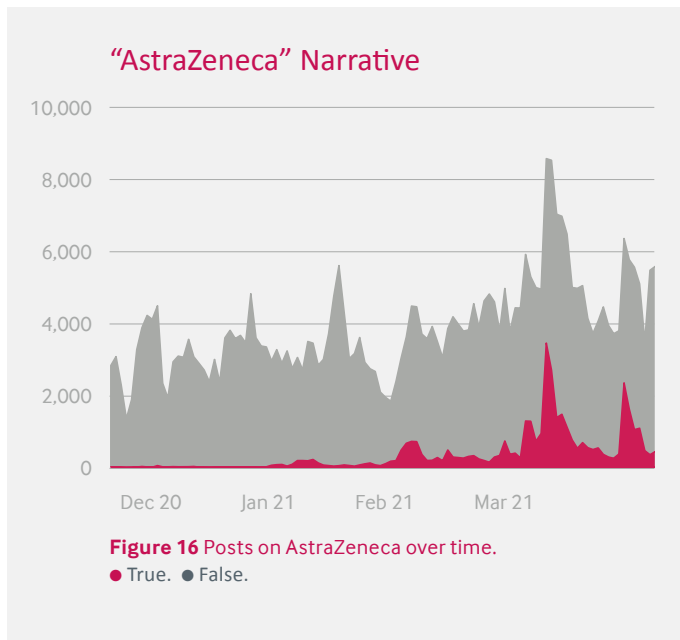
certain vaccine approvals on a temporary basis. However, these concerns are entirely out of proportion to the vanishingly low lethality rate of the vaccines.⁵⁹ The current investigation therefore focuses mainly on statements that take the data concerning fatal side effects out of context and deliberately undermine trust in approved vaccines.

In many cases, the reports being discussed suggest that patients in hospitals or residents of retirement homes have died after being vaccinated, and the actors speculate that a direct link might exist between the two. These speculations are often backed up by personal anecdotes about (sometimes distant) friends or family who have suffered serious side effects after receiving vaccines of various types. Although the peak of these discussions can be identified in mid-March, many reports and personal anecdotes about side effects and deaths were observable even in January 2021. In addition, mentions of alleged “vaccine deaths” abroad were particularly frequent in January 2021. The deaths of 23 elderly people in Norway were repeatedly attributed to the active ingredient in the *BioNTech/Pfizer* vaccine, even though the Norwegian Ministry of Health could not prove any link between the vaccine and the deaths.⁶⁰ Israel and Portugal were targeted as well as Norway; at the start of the vaccination programmes in both countries, stories were spread about hundreds of deaths in Israel and the death of a doctor in Portugal.



Comments about vaccination in retirement homes and palliative care units bordered on accusations of euthanasia. In a tweet from 14 January 2021 that was shared almost 600 times, for example, one user claimed: “The scoundrels are vaccinating palliative care patients. Aren’t they dying quickly enough?” Anti-vaxxers were also complaining as early as January 2021 that both coronavirus deaths and “vaccine deaths” were being miscounted. On 24 March 2021, the website *Reitschuster.de* accused the *Paul Ehrlich Institute* of having changed the publication schedule for its safety reports (published since January) from weekly to fortnightly because it wanted “amateur statisticians and modellers from the community of ‘coronavirus deniers’ and ‘anti-vaxxers who were just that bit too diligent to be deprived of weekly access to statistical material’”.⁶¹ Causally interpreted links between deaths and the vaccination programme, as well as allegations that the authorities and the various institutes have falsified figures, are a persistent feature throughout the whole of the observation period.

2. The AstraZeneca vaccine



A total of 9% of all the posts in the data set exhibit clear links with the *AstraZeneca* vaccine. Although the *AstraZeneca* vaccine was mentioned only very rarely at the start of the vaccination programme, from the second half of February 2021 the pace of discussion stepped up. Topics that initially attracted attention included the claim that the vector vaccine developed by the British-Swedish company *AstraZeneca* performed worse than the “mRNA” active ingredients, for example those developed by the Mainz-based company *BioNTech* SE in cooperation with the US pharmaceutical company *Pfizer*.⁶² A peak in the discussions surrounding the *AstraZeneca* vaccine can be observed in early March 2021, when Denmark, Norway and Iceland, followed by Bulgaria, the Netherlands and Ireland in turn, suspended use of the vaccine due to concerns about potential side effects.⁶³

Germany took the same decision on 15 March 2021, and the number of posts on the vaccine rose dramatically in response, especially because the Federal Health Minister’s decision was interpreted as corroboration of conspiracy theories. The actors took advantage of people’s uncertainty and the Federal Government’s unclear communication strategy to bring into questions every single vaccine

in existence and to undermine trust in authorities and approval procedures. Since posts on the *AstraZeneca* vaccine often deliberately take truthful information out of context and misinterpret it, they can frequently be categorised as misinformation rather than disinformation.

A sad example is the death of a 32-year-old woman who suffered a brain haemorrhage shortly after receiving the *AstraZeneca* vaccine. One website published an article on this case under the following headline: “Death by safety with the *AstraZeneca* vaccine – Germany shocked by a terrible case in North-Rhine Westphalia.” Dr Wolfgang Wodarg, a doctor and former Member of the Bundestag for the SPD who has denied that the virus is dangerous since the very start of the pandemic,⁶⁴ also linked to this case from his *Facebook* page.⁶⁵ In his comment, he implies that all of the COVID-19 vaccines approved in Germany caused blood clots, thereby encouraging his readers to adopt a sceptical attitude to vaccination in general. At same time, the risks of falling ill with COVID-19 are downplayed. Faced with this asymmetry of information, it is becoming increasingly difficult to objectively weigh up the risks.

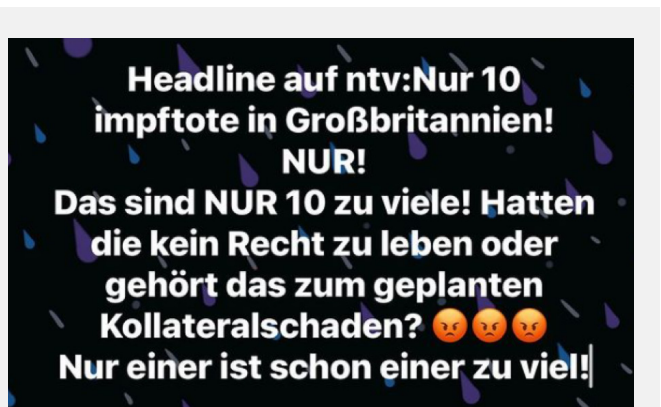
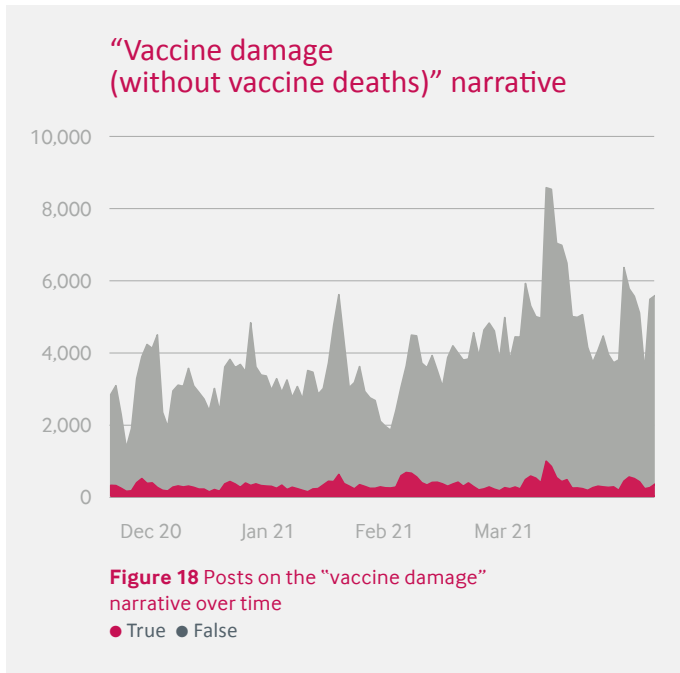


Figure 17 Distorted perception of risks through malinformation.

3. “Vaccine damage”



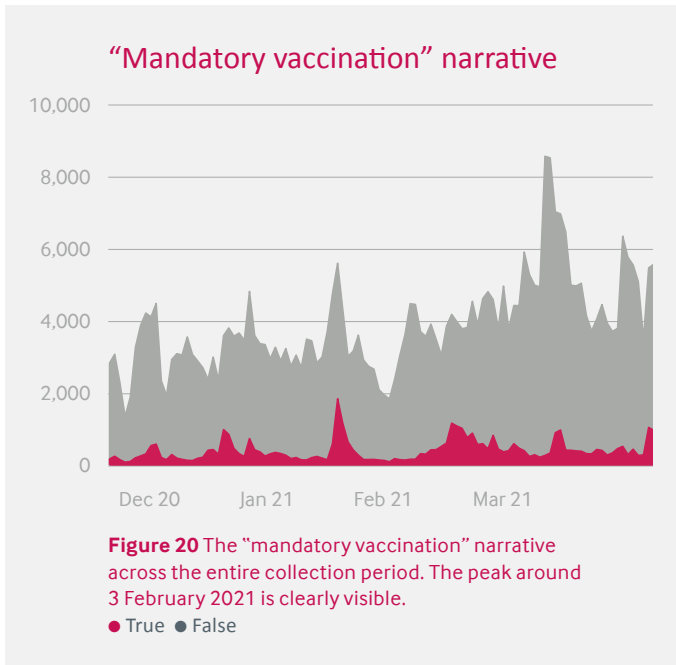
Alongside the debate about possible “vaccine deaths,” repeated discussions took place on alleged “vaccine damage,” which involves serious rather than fatal harm in most cases. The figure above shows the number of posts that relate to the narrative of health damage caused by vaccines. For the purpose of the analysis, the posts on deaths were filtered out in order to obtain a clearer picture of the discussion of alleged non-fatal side effects. Around 8% of all posts contained discussions about “vaccine damage” of this kind. One of the most popular videos concerning “vaccine damage” during the period analysed was first posted on a *Facebook* page on 27 March 2021, and later shared over 3,000 times. In it, a non-medical practitioner lists the side effects that are allegedly “directly caused by vaccination.” For example, she claims that an ever-increasing number of people are suffering from side effects so severe they are unable to work, in particular after the *AstraZeneca* vaccine. She also claims that the “boosters in the vaccines” exacerbate adverse bodily reactions and that the vaccines might cause (among other things) miscarriage, blindness, pulmonary embolisms and infertility.

At the end of the 23-minute video, the non-medical practitioner concludes with the assertion that vaccines are “weapons of mass destruction” that destroy the immune system.

Another popular video that first appeared on 11 March 2021 on the “Klagemauer.tv” Facebook page and has since been shared over 7,000 times (as of 26 April 2021) claims that the trial phase was “cut dangerously short,” and that the vaccines which people around the world are being forced (either directly or indirectly) to receive cause longer-lasting damage than being infected with COVID-19. It further claims that these risks have been concealed by the media and ignored by politicians, and that mRNA vaccines could change the human genome, since mRNA is converted into DNA. The Robert Koch Institute refuted this claim, explaining that mRNA is “the ‘construction manual’ for each individual protein in the body and should not be confused with human genetic information, or DNA.”⁶⁶



4. “Mandatory vaccination”



Around 10% of all the posts recorded related to claims of “mandatory vaccination” or even “forced vaccination” as a pandemic mitigation measure imposed by the state. There were significant fluctuations in the spread of this narrative over the period observed. The highest number of mentions of “mandatory vaccination” and the associated keywords was recorded on 3 February 2021. This was when the event and ticket agency *Eventim* called for regulations allowing private companies to insist on vaccination as a condition for entry to large-scale events (as soon as sufficient vaccine stocks were available).⁶⁷ In addition, Angela Merkel had appeared on the *ARD* programme “Farbe bekennen” the day before and made a controversial statement that was interpreted by some of the accounts observed as a reference to future “mandatory vaccination through the back door.” Her actual words were as follows:

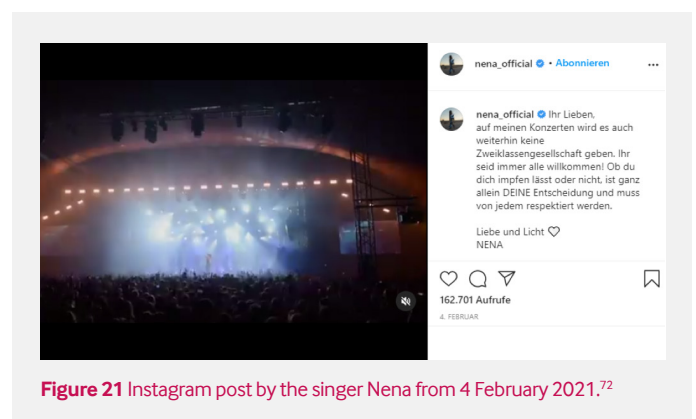
“I believe that once we get to the point that we have offered a great many people the opportunity to get vaccinated, some people will say, ‘There’s no such thing as mandatory vaccination in our country.’ At the same time, others might say, ‘Actually, I’d rather not be vaccinated,’ and we would need to make a distinction – we would need to say, ‘OK, you

don’t have to get vaccinated, but there might be certain things that you can’t do as a result.’”⁶⁸

During the same interview, however, she ruled out the possibility of special privileges for those who have already been vaccinated.

Many users regard debates on special privileges for the vaccinated as evidence that their fears about “‘mandatory vaccination’ through the back door” are coming true. On 5 February 2021, for example, a right-wing blogger wrote, “Drosten wants us to stay in lockdown until Easter. Merkel only wants the vaccinated to have full enjoyment of their fundamental rights. Concert tickets will soon only be sold to the vaccinated. Perhaps the ‘conspiracy theorists’ were right after all?” Another peak in activity relating to this narrative was observable on 25 February 2021, when the European Commission announced plans for a joint vaccine passport.⁶⁹ Renewed discussions also started on 4 April 2021, when Jens Spahn announced “more freedoms” for fully vaccinated persons.⁷⁰

Moves towards the possibility of special privileges for those vaccinated against COVID-19 was a topic of heated debate, with posts often using terms such as “two-tier society” or “vaccine apartheid.” The well-known singer Nena – real name Gabriele Kerner – voiced her opinion on *Eventim*’s statements by explaining on 4 February 2021 that there would be no “two-tier society” at her concerts. Her words were very favourably received by our monitored actors and websites. For example, a post to this effect with a screenshot of what she had said was shared by a *Facebook* page with 116,000 followers, which appears to have close links with the “Bleep-Kult”.⁷¹



Over 7,800 people responded to the post, and it was shared over 3,100 times. This page explicitly rejects vaccinations and levels heavy criticism at the German Infectious Diseases Protection Act.

A feeling of frustration was apparent among the actors observed in response to a perceived lack of public opposition to the possibility of special privileges for the vaccinated. According to a Tweet dated 4 April 2021 that was also shared by the “Querdenken” founder Michael Ballweg, for example: “It is out of the question for us to accept the announcement #FreiheitenfuerGeimpfte [#FreedomsForTheVaccinated] as perfectly normal and for us to do nothing to stop the impending two-tier society. These are not special privileges we are talking about – these are fundamental rights.”

The actors do not shy away from using comparisons with National Socialism and the GDR regime in their efforts to polarise and intensify the debate. Probably the best-known example of comparisons of this kind is the speech by a young protestor from Kassel on 21 November 2020, in which she compared herself to the resistance fighter Sophie Scholl. Tactics of this kind allow the actors firstly to position themselves as victims of a “coronavirus dictatorship” or a totalitarian state, and secondly to disparage public service reporting as “state propaganda” and the Federal Government as “DDR 2.0”.

References to the DDR and National Socialism are also commoditised. Sven Liebich, a right-wing extremist under observation by the constitutional protection authorities, sells masks in his online shop with the Star of David and the caption “unvaccinated”. The shop also sells T-shirts showing Angela Merkel with a syringe, a mountain of skulls and the phrase “Unaufhaltsam vorwärts bis zum Endsieg [Unstoppably forward until the final victory].” Liebich was arrested on 21 April 2021 during a demonstration in Berlin after he posed with Anne Frank’s “The Diary of a Young Girl” and an “unvaccinated” star in front of the Holocaust Monument.⁷³ The well-known Walter Ulbricht quote – “Nobody has any intention of building a wall!” – was also observed. T-shirts and masks with the phrase “Nobody has any intention of introducing ‘mandatory vaccination!’” are available in another online shop, for example.

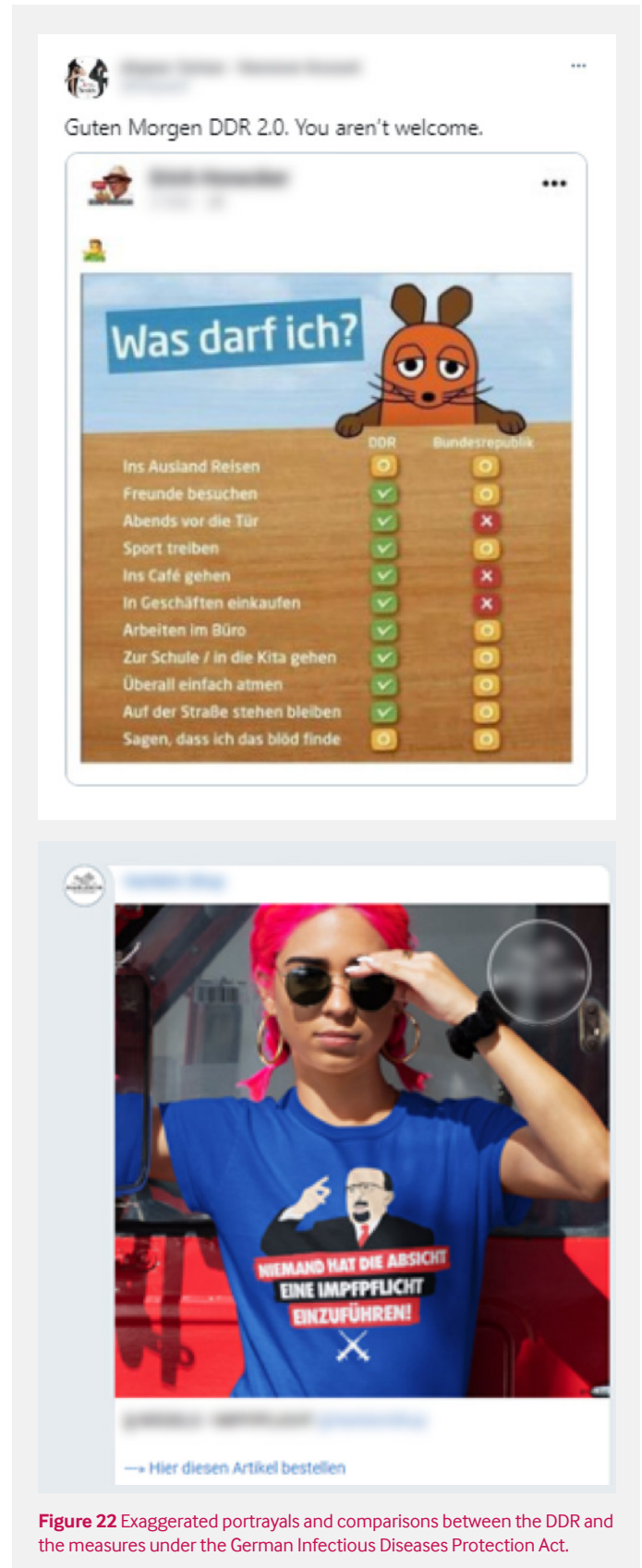
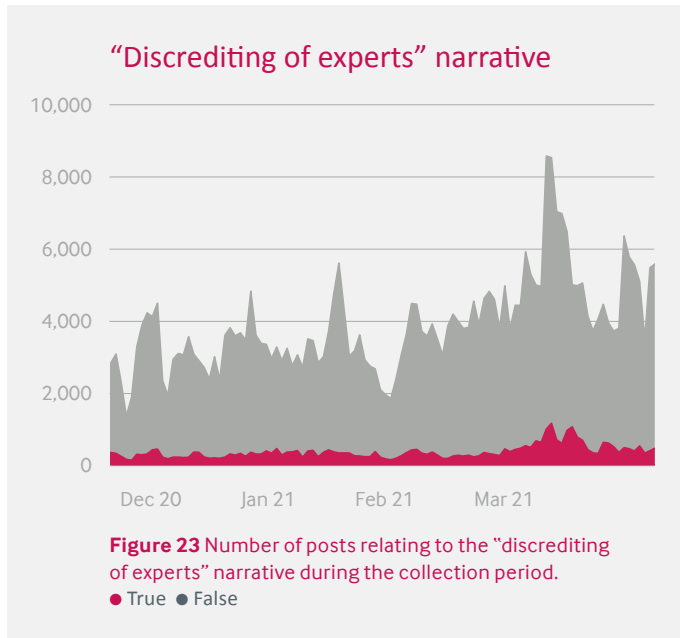


Figure 22 Exaggerated portrayals and comparisons between the DDR and the measures under the German Infectious Diseases Protection Act.

5. Discrediting of experts



The posts assigned to this narrative were those that contained hostility and attempts to discredit scientists and experts. As well as attacks on scientists and doctors who are in favour of the vaccination programme and the pandemic mitigation measures imposed by the state, the authors of these posts also pay court to “independent experts” who play down the pandemic or exaggerate the alleged and real risks of the COVID-19 vaccines. In total, over 9% of the posts that were collected contained statements of this kind.

The “discrediting of experts” narrative served as constant background noise to the anti-vax discourse during the period investigated. References to this narrative increased in mid-March when users claimed that the risks associated with the *AstraZeneca* vaccine had been predicted by prominent critics, for example the doctor Prof. Dr Sucharit Bhakdi.

A higher number of personal attacks on well-known health experts were also recorded during the period observed, in particular the virologist Prof. Dr Christian Drosten, RKI President Prof. Dr Lothar Wieler and SPD health expert Prof. Dr Karl Lauterbach. These attacks frequently take the form of ad hominem arguments. The criticisms levelled

at Prof. Dr Wieler focus either on his academic background as a veterinarian, his claimed links with pharmaceutical companies or his alleged corruptness. A post with the title “The Wieler file: entanglements and revelations” gained an especially large audience. The video was published on 21 March 2021; 14,000 people have responded to it so far, and it has been shared 36,000 times. A dpa fact check overlay is now displayed before the video will play on *Facebook* (as of 19 April 2021).⁷⁴

As a counterpoint to the widespread hostility against well-known politicians and doctors, there is also a frequent mention of a minority of doctors and scientists who have referred to the COVID-19 vaccines or other state pandemic mitigation measures as pointless or dangerous. Those quoted most often include the German-Thai microbiologist Prof. Dr Sucharit Bhakdi, the doctor Dr Wolfgang Wodarg, the toxicologist Dr Stefan Hockertz⁷⁵, the Bavarian homeopath Rolf Kron⁷⁶, the Austrian environmental ecologist Clemens Arvay⁷⁷ and the ENT specialist Dr Bodo Schiffmann⁷⁸. Another phenomenon observed in this context is the dubbing of English-language interviews with famous COVID deniers for German speakers. For example, an open letter sent on 6 March 2021 by the Belgian Geert Vanden Bossche to the World Health Organization (WHO) aroused a great deal of interest, in particular because the highly qualified virologist had worked for the Bill & Melinda Gates Foundation in the past. Various websites seized on the letter and polemicised its content; it allegedly proved that there was a risk of genocide in connection with the COVID-19 vaccines. A fact check by the research portal *Correctiv* revealed that Bossche’s hypothesis



– that the vaccines currently in existence would lead to more mutations – was unverifiable and disputed by several immunologists and virologists.⁷⁹

A number of users also allege that the Federal Government’s advisory body is incompetent. For example, Boris Reitschuster posted the following to his *Twitter* account: “First the government stonewalled my question, and now it’s just sent me a list of its lockdown advisors. There’s only six of them: a veterinarian, a paediatrician, a virologist, a pharmacologist and two physicians. How many sociologists, I hear you ask? How many psychologists? How many economists? Zero.”⁸⁰

Broadly speaking, the “discrediting experts” narrative can be regarded as a driver behind a growing loss of trust in health communication and politics, expressed on the one hand through attacks on well-known experts and decision-makers and on the other hand through support for “independent experts” who speak out against pandemic mitigation measures and question the purpose and safety of COVID-19 vaccines.

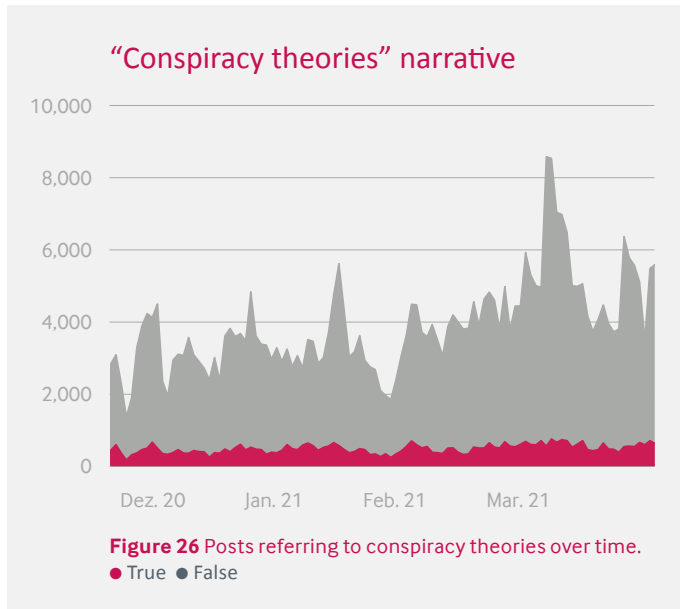


VERSCHWÖRUNGEN, ENTHÜLLUNGEN & UNGLAUBLICHES

**EX-VIROLOGE DER BILL GATES STIFTUNG
WARNT: „DIESE IMPFUNG VERWANDELT
DAS VIRUS IN EIN MONSTER, ANSTATT
ES ZU BESIEGEN...“ (+VIDEOS)**

Figure 25 Screenshot of an article about the open letter by Geert Vanden Bossche.

6. Conspiracy theories



In addition to medical disinformation, the data set also includes vaguely worded conspiracy theories about the financial or political interests allegedly underpinning the vaccination programme. In total, 12% of all the posts collected related to narrative frameworks of this kind. Fewer fluctuations over time can be observed for this narrative than for the other narratives investigated; myths about dark elites, hidden agendas and “Big Pharma” build seamlessly upon existing conspiracy theories and are apparently evergreen topics.

The “conspiracy theories” and “discrediting experts” narratives overlap on at least two points: In both cases, governments are accused of manipulating data and scientists are accused of being dependent on the pharmaceutical industry. At least three different groups of conspiracy theories can be distinguished.

The first group is based on the accusation that the European Medicines Agency (EMA) has sold out to the pharmaceutical industry, which is why it allows fast-track approvals for certain medicinal products. For example, one initiative referred to the EU Commission’s newly founded research institute, the European Health Emergency Preparedness and Response Authority (HERA Incubator), which is intended (among other things) to identify the risks associated with new COVID-19 variants at an early

stage.⁸¹ A supposed “dream come true for all of the pharmaceutical companies involved in vaccine manufacture, since it guarantees constant trials, fast-tracked approval procedures and vaccine sales.”

A second sub-narrative is that politicians allegedly want to force through vaccination without taking into account the effectiveness or harmfulness of the vaccines. For example, several posts refer to the rapid approval of vaccines and express the suspicion that political pressure was exerted on the authorities or that the approving bodies are politically controlled. The vaccine strategy is allegedly also fuelled by greed.

The last group includes more abstract narratives claiming that vaccines are tools of genocide or



mass sterilisation. Others assert that vaccines change human behaviour and will result in “transhumanism.” Narratives of this kind about sinister plans are often linked to conspiracy theories, for example about the “Great Reset,” a “plandemic,” “Agenda 2030” or a “New World Order (NWO).”

These crude conspiracies are remarkably popular. For example, a *Telegram* post on a QAnon group containing a video that has been viewed over one million times reads as follows: “Deleted IMMEDIATELY on YouTube!! where it only lasted a few minutes. Apparently the content hit a nerve. We’re on the right track! VACCINES WILL CAUSE THE TRUE PANDEMIC.” The community also shared a *Telegram* post viewed over 700,000 times, which quotes an Argentinian journalist stating that the “plandemic” was being orchestrated by a “criminal elite.”

Conclusion about the narratives

A comparison reveals that not all of the narratives are equally dominated by the news cycle. Whereas the narratives on mandatory vaccination and the *AstraZeneca* vaccine correlated strongly with current media coverage, other narratives such as alleged “vaccine deaths” and conspiracy theories behind the vaccination programme remained comparatively stable over the entire period.

Broadly speaking, concerns about the health effects of the vaccines appeared to be the most important topic within the data set. While, vaccine-related deaths were the most popular harm-related narrative. Together with the posts on non-fatal “vaccine damage,” almost one-quarter of all posts analysed contain narratives concerning the alleged health risks of the vaccines.

None of the narratives investigated became less important over the observation period. On the contrary; the number of vaccine-related posts increased. It can therefore be assumed that vaccine disinformation will continue to increase over the course of 2021 as a result of the networking of actors, a growth in channels and an expansion of the follower base.

Calls to action and resistance

Protests

Direct calls to attend protests and take part in forms of self-declared “resistance” against COVID 19 vaccines and public hygiene measures were shared on the channels observed. For example, legitimate lists of protest dates and links to online petitions were disseminated on social media. At the same time, however, readers were repeatedly called on to share disinformation and finally to “wake up,” or in other words to say no to the “system” and to realise the “truth.”

The posts investigated within the framework of this study contain both calls to attend protests and discussions on the media reporting of the listed events. For example, in connection with the protests planned throughout Germany, a “Querdenken” group advertised rallies in

7:00 AM · Feb 3, 2021 · Twitter for iPad

Bitte unterschreibt alle gegen den geplanten Corona Impfpass in der EU. Kommt der durch, könnt ihr ohne ihn (mit mRNA Impfung!!) nicht mehr in Europa verreisen. Damit verbunden kommt der Impfwang. Bitte verhindert das und unterschreibt digital. 67.000 haben bereits unterschrieben und es fehlen noch 33.000 Unterschriften. Die Frist läuft in 8 Tagen ab!! Sendet den Link an alle, die ihr kennt und bittet um Unterschriften. Es geht um unsere Selbstbestimmung, unsere Grundrechte und Freiheit! BITTE MACHT MIT, DIE ZEIT LÄUFT UNS DAVON! Hier ist der Link : <https://openpetition.eu/petition/online/verhindert-den-corona-impfpass-in-der-eu>

openPetition
Verhindert den Corona Impfpass in der EU! - Online petition
Der europäische Impfausweis, der aufgrund der Coronapandemie aktuell in Planung ist, muss verhindert werden.

Figure 28 Example of protest dates shared on 3 February 2021 and a call for readers to sign a petition on “stopping a COVID-19 vaccine passport”.

Hanover and Bremen on 13 March on *Twitter* using the hashtags #Impfpflicht [#MandatoryVaccination] and #esreicht [#EnoughIsEnough].

On the same day, violent clashes occurred at a protest attended by several hundred protesters in Dresden. According to the police, 12 of the police officers⁸² guarding a vaccination centre⁸³ were injured. The media depictions of the violence were afterwards discussed in great detail and criticised by the actors and accounts observed. On the same day, one user wrote in a *Telegram* QAnon group in response to an article by *Bild* newspaper: “This is how the Göbbels [sic] press is reporting that the Dresden protest went down.” The short post also implies that the media is controlled by the state. Another channel put together a review of 10 articles about different protests, highlighting the *Bild* article with a sad face emoji: “Press article on today’s protest; Springer is inciting hatred.”

As well as sharing justifications for the outbreaks of violence, users glorified the use of force and blamed

the police for the attacks. For example, one user wrote in a *Facebook* group that has since been made private: “WHY should Dresden be ashamed??? The PEOPLE have the right to rise up and take to the streets!!! These violent and good-for-nothing young police recruits who haven’t even earned their stripes but want to put themselves in the spotlight should be ASHAMED OF THEMSELVES.” A *Telegram* post in a QAnon group from 13 March 2021 on the alleged imprisonment of protesters in Dresden makes the author’s conception of statehood clear: “All citizens have a right to self-defence if their personal freedoms are restricted by a criminal group or individual. (...) Since the pigs in blue have violated international law and the martial law in force since 1945, every citizen has the right to a legitimate defence. The uniformed Black Guard (mercenaries/partisans) are no better than the werewolves who launched guerrilla attacks on US soldiers during World War II.” The post reveals clearly that the conspiracy theories cited are strongly associated with elements of historical misrepresentation as well as one-sided victim narratives and the related justification of violence. The group has over 23,000 members on *Telegram*.

#wirwerdenalledasein

On 20 March 2021, German users on many channels called for “global protests” using the hashtag #wirwerdenalledasein [#WeWillAllBeThere]. The largest of these protests took place in Kassel, with over 20,000 protesters and violent clashes.⁸⁴ In the run-up to the protest, a *Twitter* user wrote: “This is about controlling and manipulating people, NOT about ‘protecting their health,’” referring to another Tweet spreading disinformation about the topic of vaccine passports. A *Telegram* channel calling for readers to attend protests was also repeatedly advertised on *Facebook* as well, including in a group aimed at Hartz IV recipients (and whose name confirms this intended purpose). The rare cases of cerebral venous sinus thrombosis diagnosed in patients who had received the *AstraZeneca* vaccine were explicitly referred to as a reason for taking part in the protests. Similar sentiments were also shared in a *Facebook* group relating to financial matters: “Prof. Dr Sucharit Bhakdi has issued urgent warnings about thrombosis and many other fatal side effects!!! Come one and all to Kassel on Saturday!!! We must put a stop to this criminal behaviour!!!” A noteworthy feature in this connection is that both groups operate behind a



Figure 29 A call to action by a “Querdenken” group with various different hashtags.

front of everyday topics such as finance, instead of using relevant names and keywords such as “coronavirus” or the vaccines. This does not alter the fact that disinformation about COVID-19 was spread several times a day in both groups, turning them into a gateway to the ecosystem of alternative narratives and disinformation, in particular for poorly informed persons.

The hashtag #wirwerdenalldasein was also used in connection with the protests planned in Stuttgart almost two weeks later. Over 10,000 people were at the protest on 3 April 2021; significantly fewer people had signed up to attend, and violations of public health rules were committed. Although the protest went off peacefully for the most part, isolated attacks on journalists and security forces were recorded. The police reported that three police officers had been injured.⁸⁵

Interpretation of the right to resist

Protests also took place in Berlin on 3 April 2021. A four-minute video containing an emotional call to attend the protest refers to the right to resist enshrined in Article 20(4) of the German Basic Law.

According to Article 20(4), “All Germans shall have the right to resist [...] if no other remedy is available.”⁸⁶ This right to resist is repeatedly interpreted by opponents of the COVID-19 pandemic mitigation measures as a free pass for acts of defiance. For example, a *Telegram* post in the run-up to the protest in Kassel claimed, “that the right of all German citizens to resist attempts to do away with constitutional protections, enshrined in Article 20(4), has entered into effect with all due validity and necessity.” The post (Figure 30) demonstrates that references to Article 20(4) are often used to legitimise violence.

The data set also includes violent fantasies about the condemnation and even execution of those held responsible for the measures and the vaccination programme. A *Telegram* post that has since been deleted read as follows: “You witch, what you are doing is genocide pure and simple, and everyone who injects that filth into others should go to the gallows!!!!” Another post that has also since been deleted read as follows: “This regime run by corrupt individuals guilty of treason against their country and people and high treason, these political actors without a conscience,

should be sent to the gallows/guillotine/garrotte or if you prefer put against the wall, no deals or prison sentences, these four options alone are true justice.” The posts listed here as examples are clear evidence of the enormous potential for violence among sections of the movement. Even if it can be presumed that the authors of these posts would not necessarily perpetrate violence single-handedly, the fantasies they spread might be perceived by radicalised persons as confirmation of their beliefs. It is not hard to imagine that a radicalised and aggressive individual might even go so far as to take online calls to action of this kind literally.⁸⁷

Further calls to action

Not all of the calls to action that were investigated related to protests or calls to violence. Many users call for resistance to the COVID-19 rules. Readers are frequently called on to “wake up,” “rise up” and “fight for freedom,” and to “take to the streets.” The details are often left very vague, however. For example, a *Telegram* post from 11 March 2021 concerning deaths allegedly caused by vaccines reads as follows: “Defend yourselves, take to the streets and make sure that those responsible are brought to justice. We have the strongest weapons at our disposal: we have love. Do not resist; if in doubt, simply sit down and pray, meditate or sing.”

LEISTET WIDERSTAND!!!! KÄMPFT UND VERTEIDIGT EUCH, EUER LEBEN UND DAS EURER FAMILIE UND KINDER IM LEGALEN AUCH VOLKSGEWALTS WIDERSTAND!!!!!! UND BEKÄMPFT ZUR NOT JEDEN
 🤖🤖🤖🤖🤖🤖 IN NOTWEHR, DER EUCH DABEI IM WEGE STEHT EURE RECHTE, EURE FREIHEIT UND EUER LEBEN UND ÜBERLEBEN ZU VERTEIDIGEN, - UND DER DIE ORDNUNG DES GRUNDGESETZES BESEITIGEN WILL, - UNSTRAFBAR! SIEHE HIER, DORT FINDET IHR DIESE DIE EUCH IM WEGE STEHEN:

- DAS IST WIDERSTAND, ZU WELCHEM WIR DEUTSCHEN GEMÄSS Art. 20 (4) GRUNDGESETZ: Gegen jeden, der es unternimmt, diese Ordnung zu beseitigen, haben alle Deutschen das Recht zum Widerstand, wenn andere Abhilfe nicht möglich ist. SIEHE HIERZU AUCH HIER: [REDACTED] IN VERBINDUNG ZU Art. 25 GRUNDGESETZ "ALLE GEWALT GEHT ALLEIN VOM VOLKE AUS" UND SOMIT AUCH ALLE GEWALTAUSÜBUNG, UND AUCH ZUM NOTWEHRRECHT GEGEN JEDERMANN, GEMÄSS PARAGRAPH 227 BGB, - GEGEN JEDERMANN, AUCH GEGEN DIE POLIZEI ANWENDBAR, UND UNSTRAFBAR BERECHTIGT SIND, SIEHE: [REDACTED]

Figure 30 Extract from a post calling for violence against police officers from 5 February 2021.

Other calls to action are aimed directly at parents, telling them to boycott consent forms allowing their children to be tested or vaccinated. Readers are also told to stop giving their business to shops that ask to see people's test or vaccination status. A *Twitter* user captioned an image of an information sign in a branch of the textiles discounter *KiK* as follows: "Boycott these pointless PCR tests and the toxic COVID-19 vaccines."

Certain actors also express frustration about the lack of real opposition among the population. One example can be seen in a *Telegram* post on a QAnon channel from 7 March 2021: "To everyone asking themselves 'how much longer?' or who are 'losing faith' and whinging: I can tell you how much longer. Until you fight for your freedom. And you can't do that by sharing information on the Internet and attending a protest now and then on sunny days." Among other things, the user then calls for children to be home-schooled and for people to refuse to pay TV and radio fees and taxes. In addition, people should terminate their "relationship of employment" with the "criminal organisation known as BRD GmbH/the Federal Government." The post –



Figure 31 A call for readers to "rise up". References to children are a clichéd feature of posts containing calls to action. This post also draws a comparison with the Third Reich.

which has been viewed over 8,000 times – provides no further details of the action to be taken, however.

Monetarisisation and marketing of the pandemic

The conspiracy theorist Attila Hildmann also criticises the protest culture of the "Querdenker" and calls for "real resistance." Hildmann also issues apocalyptic warnings as a basis for selling his own products. In a post advertising food products on 14 February 2021, he wrote: "Comrade, you must lay in stocks that last at least 2 months! The lockdown imposed by the BOLSHEVIKS and SATANISTS will never be lifted! Soon a famine will break out and the GERMAN PEOPLE will perish under the totalitarian 15-km rule! (...) My nutritious range of products that are both delicious and vegan will survive even Stalingrad 2: Electric Bogaloo [sic], planned by Merkill and Bill Gates! (...) DEFEND YOURSELF BY BUYING MY DAISHO AND DELICIOUS MATCHA, THE MORE THE BETTER." Based on this evidence, Hildmann appears to be using his own conspiracy theory to sell his products, and he is not the only one attempting to use the predicted apocalypse as an opportunity to turn a profit. Many of the actors investigated in the study run their own online shops offering T-shirts, masks, stickers and other fan merchandise, and encourage their followers to buy these items.

Offline activities

Although activity in this area is concentrated online, some of it also takes place offline, with flyering and stickering in public spaces playing a particularly important role in this connection. The distribution of

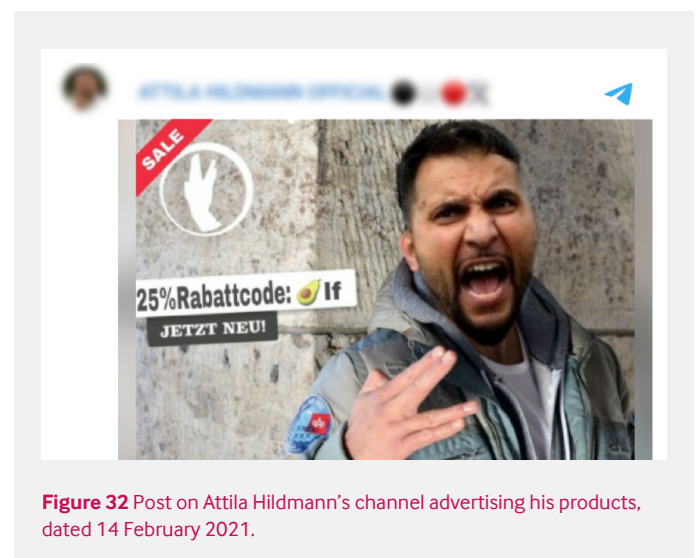


Figure 32 Post on Attila Hildmann's channel advertising his products, dated 14 February 2021.

flyers and stickers is an attempt to steer people towards disinformation channels on *Telegram* and *Facebook* or to the authors' own websites.⁸⁸ The link between the two is clearly demonstrated by an advertisement for the website *Corona-Ausschuss.de*; a plane towing a banner with the website's address is shown, and the soundtrack for the video is a song with the title "Deutschland zeig dein Gesicht [Germany show your face]." A Tweet about it was shared 350 times, and the video has been viewed 44,000 times on YouTube to date. The short video was followed by an appeal for donations and a link to the *Telegram* channel for supporters.

Measures of this kind are evidence once again of the close links that exist between online and offline activities. Digital hate has real-world consequences. The two arenas cannot be examined in isolation from each other; instead, they need to be conceptualised jointly.



Figure 33 Tweet about the banner plane.

Case study #ichlassemichnichtimpfen

Deplatforming & platform migration

ISD Germany observed the Facebook group "#Ichlassemichnichtimpfen [#IWillNotBeVaccinated]" throughout the research period. This "join in" initiative called on people to film a video of themselves holding a sign saying that they would not be getting vaccinated against COVID-19. The group was founded in early December 2020 by a member of the "Querdenken" movement, in an attempt to make the reach of the movement's group more international. Coordinated initiatives of this kind are numerous on *YouTube*, *Facebook* and *Instagram*, but "#ichlassemichnichtimpfen" is the most successful to date. It gained over 6,000 members within just one week, and was rapidly gaining ground in early 2021. Michael Ballweg, founder of the protest movement "Querdenken 711", and Markus Haintz, a lawyer in Ulm and well-known representative of the "Querdenken" movement, also joined in with the campaign. The latter brought the initiative to a broader audience through his own *YouTube* videos and calls to action on his *Telegram* channel, which is followed by 116,000 members (as of 27 April 2021).

The *Facebook* group was deleted by the platform for the first time in late February, at which time almost 120,000 members were following the posts. The founder's attempt to set up a second group failed. The group "ichlassemichnichtimpfen RELOADED" was deleted again on 3 March 2021, having gained 30,000 members in the interim.⁸⁹ The next day, the group founder announced a live interview on Facebook with Dr Wolfgang Wodarg.⁹⁰ After initially advertising what was at the time the group's website, the founder later posted a group link to *movipo.de*, an alternative platform with similarities to *Facebook* in terms of its design. The group on this platform currently has 1,359 members.

After the main groups had been deleted, various *Facebook* pages and channels attempted to continue the initiative on other platforms. A total of 10 groups with similar names can be found on *Facebook*, but these have been unable to recreate the original group's success, with member counts ranging between 31 and 6,400 (as of 26 April 2021). There are also two *Telegram* channels with the initiative's name: one

discussion group with 11,353 members and an “official” channel with around 3,500 members. There have been almost no posts about the “join in” initiative on these channels in recent months. Instead, they are mostly used to further the spread of disinformation from other channels about the COVID-19 vaccines.

A notable exception to this rule comes in the form of photographs of a protest held on 12 April 2021 in Frankfurt am Main, which show protesters with a sign reading “ich lasse mich nicht impfen.” Deletion of the main group took the momentum out of the “join in” initiative #ichlassemichnichtimpfen. The founder’s stated goal of growing the group back to its previous size on the *movipo.de* platform remains wishful thinking for the time being.



Figure 34 Michael Ballweg as a supporter of the campaign - Telegram post by the founder of #ichlassemichnichtimpfen, screenshot from 7 December 2020.



Figure 35 The group’s founder announces the change of platform and calls on members to follow her there. Photos of people holding the sign #ICHlassemichNICHTimpfen.

Practical experiences and findings

“You have to imagine that you’re hiking along a mountain path, and you come to a fork in the path. The path to the left is the ‘no vaccination’ route, along which 80,000 people in Germany alone have already died tragically. The path to the right is the ‘vaccination’ route, and 5 million Israelis, 14 million Germans and 32 million Brits have already travelled it safely, with no one coming to harm. Everyone arrived at their destination in one piece. Next to you is an experienced mountain guide – your GP – who says: ‘We’ll take the right path, the vaccination route!’. Who could possibly object to that?”

– Prof. Dr. med. Klaus Weckbecker, 14 April 2021

Methodology

In February and March 2021, *ISD Germany* interviewed 14 experts from the health sector and from the fields of science, education and communication on the topic of vaccine scepticism and vaccine disinformation. The guided interviews lasted 40 minutes and were carried out with male and female experts between the ages of 25 and 80. When selecting interviewees, particular attention was paid to the individuals’ expertise and proximity to the research topic; all of those interviewed are actively involved with the topic of vaccine scepticism and/or vaccine disinformation in their everyday working life. In addition, care was taken to cover a broad spectrum of different professional perspectives and a wide range of geographical areas, as well as to strike a balance between urban and rural settings. The experts include head nurses, science journalists, intensive care specialists, residential home managers, professors, GPs, former homeopaths, experts in strategic communication, headteachers, volunteers at vaccination centres and activists who have organised counter-protests to “Querdenken” events in recent months. A comprehensive description of the methodology and a list of the expert interviews that were carried out can be found in the Annex.

What reasons for vaccine scepticism are cited in practice?

The majority of the narratives discussed on social networks and analysed by *ISD Germany* also came up in the real-life discussions. In addition, the experts mentioned a number of additional arguments against vaccination which they had encountered. The most

frequent of these was a vague feeling of unease, which the experts identified as the main reason for COVID 19 vaccine scepticism in their professional settings. When questioned further, the sceptics typically attribute their unease to the speed of development and approval of the vaccines, and to their fear of being a “guinea pig.” This fear was particularly apparent in those who were eligible for vaccination earlier than others in their age cohort because of their jobs. The experts also reported a “second wave of vaccinations” in this context, involving those who had initially been hesitant but had later heard positive stories from acquaintances (often colleagues) who had suffered little in the way of side effects after being vaccinated.

Another narrative that often influences young women working as nurses is the fear of infertility resulting from a COVID-19 vaccine. The experts also reported scepticism about the vaccines due to the lack of long-term studies, in three cases combined with the fear of developing cancer. The interviewees had also been told by sceptics that they did not intend to get vaccinated because they had heard that the vaccines would change their DNA; many were confused about the differences between mRNA and vector vaccines and the way in which they work.

Distrust of the vaccine can also be attributed to practical factors. Emphasis was placed on the unaccustomed effort involved in getting vaccinated against COVID-19 and the new processes, for example the need to be provided with a patient information document and to sign an informed consent form, as though you were about to undergo an operation. Both the informed consent form and the fact that vaccines are administered at large centres rather than GP offices were a source of unease. Finally, the experts also referred to the argument that diseases are perfectly natural and that the human body’s natural defence mechanisms are able to cope with them. In contrast, vaccines are viewed as artificial chemicals that are foreign to the body.⁹¹

How can these arguments be countered?

The majority of experts emphasised the importance of taking the fears and concerns of sceptics seriously, and of tailoring the response to the corresponding target audience. For example, they suggested that it was important to show individuals who were sceptical about

vaccines due to their belief in the last of the narratives mentioned (the “nature” narrative), and who tended to distrust “mainstream medicine” in principle and to perceive esoteric beliefs as part of their identity, that vaccination does not necessarily need to run counter to their intrinsic values. Strategic communications promoting the vaccination programme should therefore take due account of these mindsets. For example, Prof. Detlev Ganten, founder of the World Health Summit and former head of Berlin’s *Charité* hospital, recommended that the “nature narrative” should be countered with a robust explanation of how vaccination works, i.e. that it simulates the body’s own defence mechanisms:

“It’s important to explain that it’s not a foreign substance entering the body, but a substance that strengthens the body’s own defensive forces. That’s likely to win over the environmentalists, the anti-vaxxers with esoteric beliefs and the homeopathy fans, and to create trust in vaccination as a process; it’s not about something wholly artificial created by science, it’s about using science to strengthen what nature already does.”

– Prof. Detlev Ganten, MD, PhD

On the other hand, several of the experts pointed out that a communication strategy of this kind assumes that the individuals in question are receptive to new ideas. If they are not open to different opinions, it is unlikely that they will be convinced. The success of such a strategy therefore depends on how entrenched the individuals already are in their opinions on vaccination. According to Dr Natalie Grams, doctor, former homeopath, author and former head of the Information Network on Homeopathy:

“In my opinion, the most critical point about homeopathy is that it often serves as a gateway to the abandonment of critical thinking and of trust in conventional medicine and science. Anyone who starts to believe in energised globules is likely to be more willing to believe in whatever other theories are floating around in the vicinity.”

– Dr. med. Natalie Grams

Trust as the highest command

According to a clear majority of the experts, choosing the right messenger is even more important than

tailoring the messages to the target audience. Both trust itself and (as a closely related topic) the enormous importance of trusted third parties were common themes running through all the expert interviews, with trust alone being mentioned some 50 times. The clearest example in this connection was the difference between the humanity, personal connection and relationship of trust embodied (for the majority of interviewees) by the GP on the one hand, and the anonymity and unfamiliarity of a vaccination centre on the other. The latter was also reported by Christiane von Braunmühl, who volunteers at a vaccination centre in Berlin:

“Vaccination centres are about optimising processes and getting people in and out as quickly as possible, to be quite frank. All the tiny cogs must turn in harmony so that procedures run as smoothly as possible, and so that we can increase the number of people we can vaccinate each day. This always stands at odds with efforts to preserve humanity or to promote wellbeing. No one wants to be treated like a robot. No one only wants to be reduced to the level of mere functioning, without any acknowledgement of our soul and our underlying needs.”

– Christiane von Braunmühl

The majority of the experts interviewed therefore called for steps to be taken as quickly as possible to involve GPs – trusted third parties of many years’ standing – in the vaccination strategy. A decision by the Federal Government concerning the involvement of GPs was implemented on 7 April 2021.

Dr Christian Kröner, a GP in Neu-Ulm, also talked about this phenomenon. In December 2020, Kröner became famous as the author of the “vaccination FAQs” which he posted on the door of his GP practice to answer the questions he kept hearing from patients about the COVID 19 vaccine, and which went viral on the Internet. His responses in the FAQs to his patients’ many queries about vaccination are both empathic and humorous. The “vaccination FAQs” were shared widely on social media and have been downloaded 76,000 times. Including printed copies, their reach is likely to be even larger; more and more doctors have been printing them out and using them, and so it is assumed that up to 20 million people have seen them to date. Kröner

criticised the lack of dialogue with GPs, who are responsible for informing patients on a daily basis and argued in favour of GPs being more involved in vaccine-related communications given that they vaccinate 25 million people against flu every autumn within a period of three months.⁹²

“The role of the GP is a key issue that is completely underestimated. People always have a very small number of people in their lives whom they trust completely: their spouse, perhaps their hairdresser, and their GP. This is particularly true for the older generation. If you’re a hospital doctor or even a professor, you can say what you like – people won’t let you operate on them until their GP has said that it’s a good idea. (...) Why has no one asked us to help? We know how to administer vaccines to large groups of people.”

– Dr. med. Christian Kröner

In addition to the influence exerted by GPs over individual patients, the experts emphasised the fact that GPs and medical professionals in general played an important role as ambassadors in public health communications (but for the most part are underutilised). An intensive care specialist in Berlin said that doctors often live “in their own little bubble” but play a leading role in informing patients on a day-to-day basis, since they act not only as experts, but also as trusted individuals. When asked why vaccination targets are regularly not met, even for other vaccines such as flu – even though Germans are more than willing to visit their GP and exhibit a high level of trust in health institutions per se – Professor Ganten responded that it was because the medical profession was too reticent on this point.

“It’s unusual for the German Medical Association or even individual doctors to venture to make their positions publicly known, and yet people’s personal and private relationships with their doctors are the relationship of trust we should be building on. This opportunity is being neglected at the moment, even though it’s an ideal way to increase the overall level of trust among the population at a time such as this.”

– Prof. Detlev Ganten, MD, PhD

Dr Christian Kröner also talked about the failure of doctors to make their opinions publicly known,

albeit with the proviso that he could understand his colleagues’ circumspectness. The online and offline responses to his “vaccination FAQs” that went viral were both positive and negative. One thing is certainly clear: the vaccine debate calls for civic courage.

“The abuse and criticism all came via public channels. The positive feedback, some from people very high up in their professions, senior consultants of university clinics and so on, all came privately, for example by text message or email. It was the same message, over and over again: ‘You’re doing a great thing there, but I don’t want to have anything to do with it, I don’t want to draw attention to myself.’ This fear exists, among the medical profession as well as the general public, that as soon as you express your opinion in public in any way whatsoever, you’ll attract a certain [anti-vaxxer] clientele, and this clientele is extremely aggressive.”

– Dr Christian Kröner

GPs and medical professionals in general play a special role as ambassadors, but the experts also made repeated reference to other trusted persons: the biology teacher who provides information to her fellow teachers, trusted football teammates, co-workers or fellow nurses, and initiatives involving local vaccine role models, perhaps including families of COVID-19 patients. An important point that was emphasised in this connection was that a relationship of trust should ideally already exist with the target audience, or that the ambassador should be selected from among the members of the target audience itself. Stephan Bergner, head of the Bethesda Care and Community Centre in Eisenberg (Thuringia), explained the principle of trust as follows:

“It’s clear that it isn’t enough to provide general information that is accessible to everyone, because not everyone seeks out this information. Information can be disseminated much further by trusted persons who act as ‘informers,’ in the positive sense of the word! That’s why it’s so important for the alpha member of a larger group, the one who acts as the group’s spokesperson, to be won over by the idea and to be able to communicate it credibly.”

– Stephan Bergner, Head of the Bethesda Care and Community Centre, Eisenberg

“I’d quite like to get vaccinated, but don’t tell anyone I told you that”

By analogy, group dynamics have both a positive and negative effect on vaccination intent. On the one hand, the experts reported that informative discussions with trusted individuals could increase vaccination intent among those previously sceptical about the vaccines. On the other hand, Stephan Bergner described how the opposite was achieved by a few individual employees within the retirement home he manages who were not afraid to voice their opinions loudly.

“There is a spill over effect, with the many adopting the opinions of the few. To the point that members of a team dominated by general anti-vax sentiments found it awkward if they did want to get vaccinated regardless. They didn’t want to out themselves [...] Some of them would come up and say: “I’d quite like to get vaccinated, but don’t tell anyone I told you that.”

– Stephan Bergner

Disease and the protection afforded by vaccination as highly abstract concepts

Vaccination intent also depends on whether the individuals in question know family members, acquaintances or colleagues who have been diagnosed with COVID-19. The experts surveyed believe that awareness of disease and the need for vaccination is typically very low among the general population. This can be explained in part by the classic prevention paradox: the enormous success of vaccines means that the majority of people do not realise how necessary they are. The very elderly, for whom diseases such as polio are still a vivid memory, represent an exception to this rule, and so it is not surprising that there are almost no vaccine sceptics among this age group (80+); this fact was confirmed by the experts working in medical settings based on their own experience. According to an intensive care specialist in Berlin:

“It’s very clear to us that COVID-19 is a nasty disease, but anyone who isn’t confronted with the evidence on a daily basis might not understand why. You don’t see it out on the streets. All you see there are the restrictions. It’s a hard thing to comprehend if you’re not affected by it directly and individually.”

– Intensive care specialist in Berlin

Several experts confirmed that there was a link between a lack of personal experience of COVID-19 among friends and family and increased scepticism about the vaccines. A headteacher from Thuringia explained that the stories told by certain members of staff about how ill they had been with COVID-19 had played a major role in changing the minds of other staff members who had previously been sceptical. Anecdotal evidence has a huge impact, but this can work both ways: Stephan Bergner, head of a retirement home in Eisenberg, talked about team members who had only heard about mild cases of COVID-19 among people of their age, and had therefore come to the conclusion: “If I do catch it, I’ll survive, and so I don’t need to get vaccinated.”

Rejection of authority and the desire for self determination

Of the 14 experts, only one was in favour of mandatory vaccination for certain professions. By way of contrast, the clear majority of experts believed that applying too much pressure would be counter-productive and would increase the level of distrust. This is partly due to the values that motivate many anti-vaxxers, who are less interested in vaccination as such and more interested in “self-determination” and the rejection of authority. The experts also believed that it was important to take people’s concerns seriously, particularly regarding the safety of the vaccines, and to leave the final decision up to the individual, since this too would foster trust. Prof. Weckbecker was one of the experts who voiced this opinion, and who referred to the importance of people being able to trust in their right “to hold a different opinion.”

Proactive, simple, personal and contextualised communications

The most important recommendations that emerged from the expert interviews related to choosing the right ambassadors and leveraging established relationships of trust. The majority of experts also argued in favour of simplifying communications, saying that the virus and the protection afforded by vaccines should be made more tangible using more pictures, and metaphors and clearer language. Two of the experts referred to a very simple metaphor as an example, namely that not being vaccinated was like “going through life without a seat belt on.” Methods of this kind could be used to involve

sections of the population that are often excluded at present. One expert who wished to remain anonymous (Expert 006 in the Annex) also criticised the tendency to use English terms in health communications, particularly at the start of the pandemic (e.g. “#flattenthecurve”⁹³). Another topic that was often raised was the fact that pandemic mitigation measures were often inadequately explained. Anil Bešli, co-organiser of a counter-protester against the “Querdenken” movement in Bonlanden (Baden-Württemberg), said that people often simply gave up when faced with overly complex language.

“Most people don’t understand the ins and outs of debates in the national parliament or the federal state parliaments. (...) We need to be able to explain in very simple terms why schools are now allowed to open again, why hairdressers are allowed to open again, why a curfew has been imposed and why it’s now been lifted again.”

– Anil Bešli

Two of the experts praised the information materials produced by the German Federal Ministry of Health and the Robert Koch Institute in this connection, saying that they were written in simple language and emphasising that all communications should be “translated” into language of this kind. Communication should also be personal and direct wherever possible, and the potential for misinformation should ideally be forestalled in order to avoid waves of disinformation. One way of doing this is to “answer questions before they are even asked,” which was the approach taken by Dr Christian Kröner in his “vaccination FAQs.”

The experts called for the media to do a better job of contextualising facts and expert views in their reports in order to avoid creating a “false balance,” i.e. giving a disproportionate amount of space to the opinion of a small minority, which distorts the scientific consensus.⁹⁴ The science journalist and co-founder of the news website *MedWatch*, Nicola Kuhrt, clarified in this connection that a range of different opinions should of course be presented, but that journalistic responsibility called for the different viewpoints not only to be presented but also contextualised in the case of health policy issues. She admitted that the scientific situation was also dynamic, however, with the

resulting complicating factor that science could only ever reflect the current state of research. In addition to communications regarding the COVID-19 vaccine in the context of the current crisis, the public therefore also needs to be better informed about how science and research work.⁹⁵

The experts called for respect and empathy to be displayed towards individuals expressing reluctance to be vaccinated, for vaccines to be advertised with persistence and clear language, for communication to take place in person and between equal partners and for the medical profession to position itself more clearly. At the same time, however, they also called for **health-related information to be communicated within the framework of established relationships of trust. Coalitions with carefully chosen ambassadors are the key to success.**

Recommendations

Communication of health-related information

- **A successful vaccination programme depends on increased dialogue with GPs and a greater willingness by medical professionals to clearly state their opinions.** In particular, GPs should be more involved in communications on the topic of vaccination, since they have unmatched experience and expertise in informing patients about vaccines, and also know how to win over people who err towards scepticism. Members of the general public are also keen to become more involved in the communication strategy.⁹⁶ Particularly with a view to tackling the population's diminishing trust in the government's crisis management methods, other stakeholders who continue to enjoy a high level of public trust should be more heavily involved in health-related communications, in particular doctors (as individuals) and the Robert Koch Institute (as an authority).
- **Information about COVID-19 vaccines should be communicated within the framework of established and trusted relationships.** Local initiatives should be taken with the help of the right ambassadors. Trusted individuals can be medical or nursing practitioners, but also figures who are well-known in their local areas. Materials should be made available that facilitate the sharing of information at local level. As things currently stand, some schools, nursing homes and businesses are producing their own information materials. Vaccine-related communications should be better tailored to the different target audiences, and attempts should be made to reach these audiences via the appropriate channels (elderly people via GP practices and young people via social media, for example). Ideally, the individuals chosen as ambassadors should already have established a relationship of trust with the target audience, or be drawn from the target audience itself. Social media companies hold the most information on the influencers with whom the relevant target audience interacts, and so they could help to identify potential influencers for digital campaigns. For example, YouTube is already trialling the use of sports and music influencers as ambassadors for evidence-based information about COVID-19 vaccines, with a particular focus on the under-35s.⁹⁷
- **Health-related information on COVID-19 vaccines should be communicated more proactively.** The Federal Government's communication strategy failed at a number of key moments during the observation period, for example when the approval of the *AstraZeneca* vaccine was suspended;⁹⁸ communications were non-existent, inconsistent or delayed. Communication gaps of this kind were and are used in a targeted manner to spread uncertainty and sow disinformation.⁹⁹ The source from which the information is originally heard is therefore a decisive factor. Conspiracy theories and alternative medicine narratives are mutually reinforcing and expand to fill any information vacuum. The same applies to the addressing of ethical issues in the public health sector, such as the compatibility of prompt and transparent action with a situation where only incomplete information is available; this must be balanced against the need to provide citizens with evidence-based and facts-based information, which might mean tolerating potential delays in communication and awareness-raising efforts. This is an enormous challenge facing both government communication teams and journalists, and must always be weighed up with due consideration for ethical concerns.¹⁰⁰ In addition, the information provided in communications on the COVID-19 vaccine should be "translated" and simplified to avoid excluding sections of the population.
- **Information about COVID-19 vaccines should be better contextualised by the media in order to prevent a "false balance" of coverage.** Media outlets are jointly responsible for spreading misinformation through sensationalist clickbait articles, through the increased use and mainstreaming of problematic narratives, and through a failure to contextualise information. Freedom of expression must naturally continue to be a matter of course. Online resources such as those produced by the "First Draft News" project can be used as guidance by journalists reporting on sensitive topics that are particularly prone to manipulation or disinformation.¹⁰¹
- **In the long term, vaccine-related communication should be aimed at encouraging more realistic expectations of risk assessments.** The prevention

paradox means that certain sections of the population have a lack of understanding of the need for vaccines. It is also important to normalise the concept that vaccines are like any other medications in that they may have side effects, but that these are nevertheless outweighed by the benefits of vaccination. The aim in this regard should be to promote informed and self-determined decisions. In addition to communications regarding the COVID-19 vaccine, the public also needs to be better informed about the effectiveness and effects of vaccines in general.

- **Further research should be carried out into the detailed choice of wording in vaccine communication messaging, and promising messages and communication methods should be incorporated into the COVID-19 vaccine strategy.** For example, a pre-print study by Milkman et al. (2021) found significant differences between similar-sounding messages calling on people to get vaccinated against the flu. By far the most successful message consisted merely of the words “Flu shot reserved for you” sent twice by text message; it was much more successful than the message “Reply to receive the flu shot”.¹⁰² Moehring et al. (2021) also established that providing individuals with accurate information about vaccination intent among their cohorts significantly increased the likelihood that they would get vaccinated. Supplying normative information about vaccination intent reduced the share of people who were unsure whether they wanted to be vaccinated or who definitely did not want to be vaccinated by 5%.¹⁰³

Platforms

- **The governments of Germany and Austria should review the regulations currently governing technology platforms (such as the German Network Enforcement Act and the Austrian Communication Platforms Act) in order to determine whether more proportionate and risk-based regulatory approaches are needed.** The regulation of online services should be aimed not only at removing illegal content, but also at tackling the potential risks of algorithms and the operating mechanisms inherent to social media platforms that proactively and deliberately spread dangerous content, including disinformation and conspiracy theories about vaccines and the COVID-19 pandemic. The German Network Enforcement Act (introduced in 2018) and the Austrian Communication Platforms Act focus only on combating illegal content. Statements containing disinformation and conspiracy theories – including those relating to the different COVID-19 vaccines and COVID-19 itself – are quite rightly still legal, meaning that they are not covered by the provisions of these Acts. Approaches are therefore needed that go beyond decisions relating to the moderation of certain content and instead take into account structural factors such as the technological architecture of platforms and the design of certain platform products. One example of a structural approach of this kind is the duty of care model for platform operators proposed in the UK’s Online Harms White Paper,¹⁰⁴ and another is the procedure proposed in the EU’s Digital Services Act. The duty of care obligations would make platform operators responsible for keeping users safe and protecting them against foreseeable risks. For example, this might involve operators changing their algorithms to ensure that content based on extremist and conspiracy theories relating to COVID-19 vaccines is no longer recommended. The maximum size of private messenger channels and the speed at which content can be shared could also be restricted; this change has already been implemented by the messenger service WhatsApp. The duty of care would therefore create incentives for companies to design their platforms and products with a stronger focus on user safety and on mitigating the social risks relating to the pandemic and the COVID-19 vaccines. When revising the existing regulatory provisions governing

online platforms, governments should also pay careful attention to the scope of the online services that should be covered by a regulatory regime of this kind. For example, the rapid spread of disinformation and conspiracy theories via the messenger service *Telegram* means that this latter poses a particular risk to pandemic mitigation measures; in spite of the fact that its operating mechanisms are similar to those of a platform, however, it does not fall within the scope of the German Network Enforcement Act, since to date the provider has been classified purely as a messenger service. The German Federal Government should consider whether the scope of the Network Enforcement Act can be expanded to include previously unregulated platforms such as *Telegram* if they are used to host or curate disinformation, and the Austrian Federal Government should also consider whether *Telegram* can be included within the scope of the Communication Platforms Act. The broad definition of online platforms proposed in the Digital Services Act could be used as a guide in this connection.

helps journalists and researchers understand what happens on the *Twitter* platform, is a good example of data that can be accessed in this way. The spread of disinformation about vaccines shows not only that moderation rules must be enforced, but also that there is an urgent need for a coordinated response by the different platforms and for mechanisms that halt the viral spread of harmful content. Cooperation between different social media platforms should also be strengthened in order to stem the tide of vaccine disinformation. A coalition between social networking platforms, including large platforms and emerging social networks – as already achieved in relation to terrorism, for example – could help to combat the “infodemic” heralded by the WHO.¹⁰⁶ For example, major platforms could pool their expertise and resources on disinformation threats, provide funding for independent research on cross-platform threats and help smaller platforms to tackle known sources of disinformation on their own websites.

- **Platforms should endeavour to ensure that their moderation policies are enforced consistently and guarantee transparent access to data so that their performance in terms of content moderation can be reviewed.** The sharing of posts containing disinformation about the alleged dangers of vaccines was observed during the analysis alongside the spread of numerous conspiracy theories relating to vaccines; both of these phenomena stand in blatant contradiction to the platforms’ own policies.¹⁰⁵ The nature of the content shared several hundred or even thousands of times reveals that despite their efforts to date, the platforms continue to host disinformation that promotes distrust of vaccines. This gap in enforcement means that the platforms are not able to create the safe space for users they promise in their terms and conditions of use. The platforms should therefore provide content moderators with more resources, including training from experts on topics such as public health. They should also be more transparent about how well they perform in terms of moderating content by providing researchers and the public with structured access to data in a responsible manner. The *Twitter* API, which

Civil society

- **Educational opportunities play a significant role in improving the resilience of citizens and users to posts containing disinformation or conspiracy theories. Efforts to combat the “infodemic” should be focused in particular on strengthening digital media skills relating to democracy (digital citizenship education) and broadening the public’s understanding of disinformation.** The increasingly important role played by the Internet during the COVID-19 pandemic means that digital media skills and critical thinking must be fostered even more diligently among users of all age groups. Users must also be given the skills and knowledge they need to build positive and resilient communities online. This requires improved knowledge of digital phenomena such as disinformation, the impacts of algorithms and extremist recruitment tactics.¹⁰⁷ One example of a holistic approach to this problem is the Business Council for Democracy (#BC4D) set up by *ISD*, the Hertie Foundation and the Robert Bosch Foundation, which goes into workplaces and works directly with people to broaden their awareness of hate speech, disinformation and conspiracy theories.¹⁰⁸
- **Researchers should carry out a very critical analysis of changes in content over time and the potential convergence of anti-vaxxers and other actors, in particular right-wing extremists and conspiracy theorists.** The narratives of anti-vaxxers, right-wing extremists and conspiracy theorists, exhibit significant overlaps that promote convergence in terms of ideologies and also, as a result, in terms of members and organisational structures. Claims about the dangers of vaccines and associated anti-vaxxer narratives are seized on by many conspiracy theorists and incorporated into the right-wing extremist narrative of a “Great Replacement” or a “Great Reset”. The spread of the QAnon meta conspiracy theory, which serves as a clearing house for a large number of smaller-scale conspiracy theories, is particularly crucial in this respect. Narratives that initially appear comparatively harmless and concern the alleged benefits of not being vaccinated and of being “naturally” infected with preventable diseases can thus tag onto narratives of a global elite with

coordinated secret plans that present a threat to the general public, which are often fundamentally and historically antisemitic. Continuous monitoring of the ideological link between the two, informed by the social, cognitive and historical sciences, is necessary as a source of early warnings about radicalisation processes of this kind.

Annex

Methodology

We chose a *mixed methods* approach as a basis for answering our research questions. This approach combined ethnographic analysis with automated textual analysis of large data sets with the intent of identifying and analysing the digital spread of vaccine disinformation.

Data collection

The data was collected on *Facebook*, *Instagram*, *Twitter* and *Telegram*. The collection period extended from 21 December 2020, when the first COVID-19 vaccine was approved in Germany, until 5 April 2021. Data was collected from all platforms using actor-based queries. The selection of actors will be explained in the following section. In the case of *Twitter*, the data was collected via *Twitter's* public *application programming interface* (API). Data from *Facebook* and *Instagram* was subsequently extracted via the *Crowdtangle* API, whereas *Telegram* posts were accessed via the *Telegram* API. The data was processed using Method52, which is a system developed by the *Centre for the Analysis of Social Media (CASM)* and *ISD* for the collection, analysis and visualisation of discussions, messages and other posts on social media platforms and on forums and websites.

Choice of actors and accounts

Actors were chosen for the data analysis on the basis of a three-stage approach. Firstly, a manual list containing **389** accounts posting dubious content was compiled ("seed list"). The main criterion applied when choosing actors was that they should have shared disinformation relating to the topic of vaccination. The actors were then coded on the basis of four categories: COVID-19 opposition, medical disinformation, right-wing extremism and conspiracy theories. Actors were coded as COVID-19 opponents if their primary objective appeared to be the categorical rejection of the government's pandemic mitigation measures and the spread of associated misinformation about the risks of the virus. They were coded under the medical misinformation category if their primary objective appeared to be spreading unproven information relating to health and medicine. They were coded as right-wing extremists if they met at least three of the following criteria, based on the definition by Cas Mudde: nationalism, racism, xenophobia, anti-democracy and

the strong state.¹⁰⁹ They were coded under the fourth category of conspiracy theories if they shared any of a wide range of such theories. The boundaries between these categories were often fluid.

Secondly, the software described above (Method52) was used to identify the "online community." This community consists of three parts: (a) certain accounts entered manually as belonging to the community ("seed list"), (b) relevant URLs or domains linked to by members of the community, and (c) relevant topics of discussion for the community based on keywords and sentences. The software uses these initial definitions to find additional accounts that have either interacted directly with the accounts on the seed list or posted or shared the URLs that were investigated. The accounts are then automatically classified as belonging to the "core" of the community or as "interactive", depending on the level of their engagement with the community. The process is iterative; new core accounts and the URLs that they share serve as additional sources for new candidate accounts, whose relevance is then automatically assessed.

With a view to identifying potentially relevant anti-vax accounts, a list of seed accounts, a collection of terms (anti-vaccine keywords in German) and a list containing links to anti-vaxxer disinformation articles were entered into the software. After two runs of the software, **818** core accounts of potential interest and thousands of interactive accounts were identified.

Finally, the list of "core" accounts that had been identified was manually checked by analysts in its entirety in order to determine which accounts were in

Platform	"Seed" accounts	"Core" accounts identified	Accounts incorporated into the analysis
<i>Facebook</i>	126	283	345
<i>Instagram</i>	47	13	53
<i>Twitter</i>	61	522	555
<i>Telegram</i>	155	N/A	155
Total	389	818	1,108

Table 2 Number of seed accounts, accounts identified and accounts incorporated into the analysis. Instagram belongs to Facebook; the two were counted together in this instance.

fact relevant to the investigation. The relevant accounts were incorporated into the analysis together with the seed accounts. Overall, **1,108** accounts of interest were identified and analysed across the entire period.

The data set was then re-filtered down to posts containing the keywords in the final list. Unless otherwise specified, all analytical material in this report relates to the data set that has been filtered in this way.

Filtering for relevant posts

Between 21 December 2020 and 5 April 2021, the actors that were analysed published a total of 4,777,029 posts, of which 2,066,755 appeared on *Twitter*, 1,863,251 on *Telegram*, 838,406 on *Facebook* and 8,617 on *Instagram*.

A project-specific list of vaccine-related keywords was developed and tested in order to limit the data set to the research focus, or in other words vaccine disinformation. We used the *M52 Keyword Annotator* component to identify posts containing one or more vaccine disinformation keywords. Each post containing one or more of the selected keywords was identified as relevant. A stricter (“exact”) inclusion criterion was used for certain keywords so that posts would only be classified as relevant if they contained the exact keyword; in the case of others we allowed a looser correspondence, so that posts would also be classified as relevant even if they contained only part of the keyword (e.g. “impf” > “impfung” “#impfung” [“vacc” > “vaccination” “#vaccination”]).

Alongside the development of the initial keyword lists, random accuracy checks were also carried out. Keywords that were too vague and that appeared to give rise to a significant amount of noise were removed or altered, and additional keywords that were

Platform	Unique posts	Unique accounts
<i>Facebook</i>	100,834	328
<i>Instagram</i>	1,661	41
<i>Twitter</i>	210,351	533
<i>Telegram</i>	103,860	140
Total	416,706	1,042

Table 3 Unique posts and accounts in the filtered data set, sorted by platform.

discovered during this qualitative review were added. The final list of keywords can be found in the Annex.

Identification of main narratives

Additional lists of keywords were created within our data set in order to annotate the most important narratives identified through qualitative analysis, quantify them and track their development over time. Once again, a manual random analysis was carried out for the purpose of checking and supplementing the list of keywords. The individual narratives are not mutually exclusive, and the same post can be assigned to more than one narrative. The final list of keywords for each narrative can be found in the Annex.

Narrative	Number of posts	Share of total posts (in %)
“Vaccine deaths”	66,255	15.90%
Conspiracy theories	50,664	12.16%
„Mandatory vaccination“	43,543	10.45%
Discrediting of experts	38,936	9.34%
<i>AstraZeneca</i>	38,590	9.26%
“Vaccine damage”	34,165	8.20%
<i>BioNTech</i>	32,980	7.91%
<i>Moderna</i>	6,293	1.51%

Table 4 List of narratives and posts per narrative.

Extraction of links and domains

The links and domains were analysed by extracting all links embedded in *Facebook*, *Instagram*, *Twitter* and *Telegram* posts from the data set. The links were then expanded and the number of links in the various posts were added up in order to obtain the overall distribution of individual links across all of the platforms in our data set. This resulted in a list of domains (i.e. how many links) and a unique number (i.e. how many different links) for each domain identified.¹¹⁰

Creation of the network map

A network map connecting all of the domains and their corresponding links with the actors were created to establish connections between the use of links and the actors. The resulting network was filtered to reduce it down to the domains that had shared over 100 links from our actor set. The connections obtained in this

way were then algorithmically plotted to show clusters according to the frequency of the connections. The larger a node appears on this visualisation, the more connections it has. The different colours indicate the proximity of the accounts identified by the algorithm to each other. Larger nodes are domains that are linked to nodes of actors. Each line or edge is therefore a shared URL that connects a protagonist and a web domain.

Literature review

An extensive literature review was also carried out in order to locate the analysis within the current state of research, including research on the history and strategy of the anti-vax movement, the public health situation in Germany, and political and social resilience in Germany. Empirical research and theories from the cognitive and social sciences were used to contextualise the influence of digital disinformation on individuals, organisations and society as a whole. The literature review also included an evaluation of health communication in vaccination campaigns.

Expert interviews

In February and March 2021, analysts interviewed 14 experts from the healthcare sector and from the fields of science, education and communication on the topic of vaccine scepticism and vaccine disinformation. The guided interviews lasted 40 minutes and were carried out with male and female experts between the ages of 25 and 80. The following criteria were applied when selecting the experts:

Selection criteria:

- 1. Expertise and proximity to the research topic:**
All of the experts who were selected are actively involved with the topic of vaccine scepticism and/or vaccine disinformation in their everyday working life.
- 2. Broad spectrum of professional perspectives:**
The experts include head nurses, science journalists, intensive care specialists, retirement home managers, professors, GPs, former homeopaths and doctors with experience of “holistic” medicine, experts in strategic communication, headteachers, volunteers at vaccination centres and activists with experience of organising counter-protests to “Querdenken” events in recent months.

- 3. Wide range of geographical areas:** The experts came from six different federal states in the north, east, south and west of Germany. Care was also taken to ensure a balance between urban and rural settings.

Execution and evaluation:

The expert interviews were carried out via Zoom and recorded, with the exception of an interview with two experts on strategic communications that was not recorded. A questionnaire containing twelve questions was used as guidance for the interviews, but individual aspects could be directly addressed in more depth. The interviewees responded to the questions in the knowledge that they could remain fully anonymous or opt for differing levels of anonymity. Eight of the interviewees agreed to the publication of their names in the report. Automated and subsequently manual transcriptions were produced of the interview recordings. The experts’ statements were thematically coded and compared for qualitative evaluation purposes. Consent to the use of direct quotes by individuals was obtained prior to publication.

List of expert interviews

- Expert 001 – Interview carried out on 17 February 2021 by Hannah Winter (Prof. Klaus Weckbecker, Chair for General Practice and Interprofessional Healthcare at the University of Witten/Herdecke and local GP in Bad Honnef, North Rhine-Westphalia)
- Expert 002 – Interview carried out on 23 February 2021 by Hannah Winter (Prof. Detlev Ganten, founder of the World Health Summit and former head of Berlin's Charité hospital, Berlin/Brandenburg)
- Expert 003 – Interview carried out on 24 February 2021 by Hannah Winter (Christiane von Braunmühl, volunteer at a vaccination centre in Berlin)
- Expert 004 – Interview carried out on 24 February 2021 by Hannah Winter (intensive care specialist, Berlin)
- Expert 005 – Interview carried out on 24 February 2021 by Hannah Winter (Dr Christian Kröner, GP in Neu-Ulm, author of the “vaccination FAQs” that went viral, Bavaria)
- Expert 006 – Interview carried out on 26 February 2021 by Hannah Winter (expert on political communication, anonymous)
- Expert 007 – Interview carried out on 26 February 2021 by Hannah Winter (head of a retirement home, Brandenburg)
- Expert 008 – Interview carried out on 26 February 2021 by Hannah Winter (Anil Bešli, co-organiser of a counter-protest to a “Querdenken” event in Bonlanden, candidate for election to the federal state parliament for Die Linke party in the constituency of Nürtingen, Baden-Württemberg)
- Expert 009 – Interview carried out on 2 March 2021 by Hannah Winter (GP, Bavaria)
- Expert 010 – Interview carried out on 10 March 2021 by Hannah Winter (Stephan Bergner, Head of Bethesda Care and Community Centre, Thuringia)
- Expert 011 – Interview carried out on 10 March 2021 by Hannah Winter (employee of a hospital in Thuringia)
- Expert 012 – Interview carried out on 17 March 2021 by Hannah Winter (Nicola Kuhrt, science journalist and co-founder of MedWatch, Hamburg)
- Expert 013 – Interview carried out on 17 March 2021 by Hannah Winter (Dr Natalie Grams, doctor, homeopathy critic and former head of the critical Information Network on Homeopathy; place of residence redacted)
- Expert 014 – Interview carried out on 17 March 2021 by Hannah Winter (headteacher in Thuringia)

Annex

Keywords for the different narratives

Vaccine deaths:

#tod, #tot, gestorben, Impftod, Impftote, Impftoter, starb, starben, sterbe, Sterbefälle, sterben, stirbst, stirbt, Tod, Tode, Todes, Todesfall, Todesfälle, Todesopfer, Todesursache, tot, tote, toten, toter, verstorben [#death, #dead, died, vaccine death, vaccine deaths, vaccine deaths, died, died, die, fatalities, die, die, dies, death, deaths, death, death, deaths, victim, cause of death, dead, deaths, deaths, deaths, died].

AstraZeneca:

#AstraZenaca, #AstraZenaca, #astrazeneca, #vaxzevria, Astra Zenaca, Astra Zenaca, Astra Zeneca, Astra/Zeneca, AstraZen, Astrazenaca, AstraZeneca, Oxford-Impfstoff, vaxzevria [#AstraZenaca, #AstraZenaca, #astrazeneca, #vaxzevria, Astra Zenaca, Astra Zenaca, Astra Zeneca, Astra/Zeneca, AstraZen, Astrazenaca, AstraZeneca, Oxford vaccine, vaxzevria].

Vaccine damage:

#Folgeschäden, #Folgeschaeden, #Impfbruehe, #Impfbrühe, #impfdreck, #Impfjauche, #impfopfer, #Impfploerre, #Impfrisiken, #Impfrisiko, #Impfschaden, #Impfschäden, #Impfschaeden, #Koerperverletzung, #Körperverletzung, #Nebenwirkung, #Nebenwirkungen, #VAXXED, Folgeschaden, Folgeschäden, Gesundheitsschaden, Gesundheitsschäden, Impfbrühe, Impfdreck, Impfgeschädigte, Impfjauche, Impfkritik, Impfnebenwirkung, Impfopfer, Impfpflörre, Impfschaden, Impfschäden, Impschaden, Impschäden, Nebenwirkung, Nebenwirkungen der Impfung, Nebenwirkungen, Risiken, schwere Nebenwirkungen, Totalüberwachung [#LongTermDamage, #LongTermDamage, #VaccineFilth, #VaccineFilth, #VaccineMuck, #VaccineMuck, #VaccineVictim, #VaccineFilth, #VaccineRisks, #VaccineRisk, #VaccineDamage, #VaccineDamage, #VaccineDamage, #Injuries, #Injury, #SideEffect, #SideEffects, #VAXXED, side effect, side effects, health damage, health damage, vaccine filth, vaccine muck, vaccine victims, vaccine muck, vaccine criticism, vaccine side effect, vaccine victim, vaccine muck, vaccine damage, vaccine damage, vaccine damage, vaccine damage, vaccine damage, side effect,

side effects of vaccine, side effects, risks, serious side effects, total surveillance].

Mandatory vaccination:

#Benachteiligung, #boycottAlltours, #boycotteventim, #eventim, #Grundgesetz, #Grundrechte, #Impfapartheid, #Impfpass, #Impfpflichtdurchdiehintertuer, #ImpfpflichtDurchDieHintertür, #impfzwang, #indirekteimpfpflicht, #NeueFreiheiten, #Niewiederalltours, #NieWiederEventim, #NOEVENTIM, #sonderrechte, #Veranstaltungsnazis, #zeroeventim, #zwangsimpfung, #zweiklassengesellschaft, Allsun, Alltours, Ausgrenzung, Benachteiligung, Ungeimpfter, Benachteiligung, Bevorteilung Geimpfter, Bevorteilung von Geimpften, Bevorzugung Geimpfter, Bevorzugung von Geimpften, Diskriminiert, neue „Freiheiten“, Diskriminierung von Impfverweigerern, Diskriminierung, Neue Freiheiten, Eventim, Ferien, Flugesellschaft, Flugesellschaften, Grundrechte nur für Geimpfte, Impfapartheid, Impf-Apartheid, Impfpass, Impfpässe, „Impfpflicht“ durch die Hintertür, Impfpflicht, Impfzwang, indirekte impfpflicht, Konzert, Nena, nicht mehr am öffentlichen Leben teilnehmen, Privilegien, privilegiert, Privilegierung Geimpfter, Reisen, Sonderrechte für Geimpfte, Sonderrechte, Urlaub, Vorzugsbehandlungen von Geimpften, zwangsimpfung, Zwei Klassen Gesellschaft, Zweiklassengesellschaft, Zwei-Klassen-Gesellschaft, Zwei-Klassen-Recht. [#discrimination, #boycottAlltours, #boycotteventim, #eventim, #BasicLaw, #FundamentalRights, #VaccineApartheid, #VaccinePassport, #MandatoryVaccinationThroughTheBackDoor, #MandatoryVaccinationThroughTheBackDoor, #MandatoryVaccination, #IndirectMandatoryVaccination, #NewFreedoms, #NeverAgainAlltours, #NeverAgainEventim, #NOEVENTIM, #SpecialRights, #EventNazis, #zeroeventim, #MandatoryVaccination, #TwoTierSociety, Allsun, Alltours, exclusion, discrimination against unvaccinated, discrimination, preferential treatment of vaccinated, preferential treatment of vaccinated, preferential treatment of vaccinated, discriminated, new “freedoms”, discrimination against vaccine refusers, discrimination, new freedoms, Eventim, holidays, airline, airlines, fundamental rights only for vaccinated, vaccine apartheid, vaccine

apartheid, vaccine passport, vaccine passports, “mandatory vaccination” through the back door, mandatory vaccination, mandatory vaccination, indirect mandatory vaccination, concert, Nena, no longer take part in public life, privileges, privileged, privileges for vaccinated, travel, special rights for vaccinated, special rights, holiday, preferential treatment for vaccinated, mandatory vaccination, two-tier society, two-tier society, two-tier society, two-tier law].

Discrediting of experts:

Bhakdi, Clemens Arvay, Corona Transition, Corona-Ausschuss, Coronatransition, Coronatransition, Dahlke, Dr. Sucharit Bhakdi, Dr. Wolfgang Wodarg, Drosten, Epidemiologe, Epidemiologin, Hockertz, Homburg, Karina Reiss, Karina Reiß, Pandemiejournalismus, RKI, Robert-Koch Institut, Rolf Kron, Schiffmann, Stiftung Corona-Ausschuss, Streeck, Virologe, Virologin, Wodarg, Zahlenmanipulation, Zahlenmanipulationen [Bhakdi, Clemens Arvay, coronavirus transition, Corona-Ausschuss, coronavirus transition, coronatransition, Dahlke, Dr Sucharit Bhakdi, Dr Wolfgang Wodarg, Drosten, epidemiology, epidemiologist, Hockertz, Homburg, Karina Reiss, Karina Reiß, pandemic journalism, RKI, Robert Koch Institute, Rolf Kron, Schiffmann, Corona-Ausschuss Foundation, Streeck, virologist, virologist, Wodarg, manipulation of figures, manipulation of figures].

Conspiracy theories:

#Bevoelkerungskontrolle, #Bevoelkerungskontrolle, #BigPharma, #depopulation, #Entvoelkerung, #Entvoelkerung, #Entvoelkerungswaffe, #Gates, #GatesFoundation, #GatesStiftung, #GibGatesKeineChance, #impflobby, #impfpropaganda, #impfpropagandist, #impfpropagandisten, #Pharma, #Pharmabranche, #Pharmaindustrie, #Pharmalobby, #saynotobillgates, #saynotogates, Bevölkerungskontrolle, Bill Gates, billgates, Chipimplementierung, depopulation, Entvölkerung, Entvölkerungswaffe, finanzielle Interessen, Gates Foundation, Gates Stiftung, GatesFoundation, Impflobby, Impf-Lobby, Impf-Lobbyist, Impfpropaganda, Impfpropagandist, Impfpropagandisten, melinda gates, Mikrochips, Pharma industrie, Pharma, Pharmabranche, Pharmaindustrie, Pharma-Lobby, Pharma-lobbyist Jens Spahn, Pharma-lobbyist Spahn, Pharma-Lobbyist [#PopulationControl, #PopulationControl, #BigPharma,

#depopulation, #depopulation, #depopulation,
#WeaponOfDepopulation, #Gates, #GatesFoundation,
#GatesFoundation, #DontGiveGatesAChance,
#VaccinationLobby, #VaccinePropaganda,
#VaccinePropagandist, #VaccinePropagandists,
#Pharma, #PharmaIndustry, #PharmaIndustry,
#PharmaLobby, #saynotobillgates, #saynotogates,
population control, Bill Gates, billgates, chip implants,
depopulation, depopulation, weapon of depopulation,
financial interests, Gates Foundation, Gates Foundation,
GatesFoundation, vaccination lobby, vaccination
lobby, vaccination lobbyist, vaccination propaganda,
vaccination propagandist, vaccination propagandists,
melinda gates, microchips, pharma industry, pharma,
pharma industry, pharma industry, pharma lobby,
pharma lobbyist Jens Spahn, pharma lobbyist Spahn,
pharma lobbyist]

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