Conspiracy theories during Covid 19

The case of Denmark

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Conspiracy theories during the Covid-19 pandemic – the case of Denmark

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Preface

This white paper investigates the nature and prevalence of conspiratorial thinking in the context of the COVID-19 pandemic in Denmark. It aims to qualify the current debate regarding conspiracy theories in this context by approaching the phenomenon from multiple methodological angles.

Danish-language Facebook posts serve as the point of departure for this study. First, the paper explores the conspiratorial rhetoric in Danish Facebook posts to understand how people who believe in conspiracies have taken part in the online debate. Second, it analyses how content labelled as misinformation has spread across online platforms and whether content that can be considered conspiratorial has played a special role. Third, it examines whether the amount of conspiratorial content has increased during the pandemic in selected corona-critical Facebook groups. The paper does not assume a particular normative standpoint when engaging with the data; rather, it seeks to provide a nuanced and empirically grounded assessment of the nature and prevalence of conspiratorial thinking in Denmark in terms of both quality and quantity.

This white paper is a joint effort by researchers affiliated with the DataPublics and Alter-Publics projects as well as the Center for News Research at Roskilde University. We thank Thomas Hedin and the entire staff at TjekDet for their insights regarding their fact-checking routines and the assistance with data collection. We also express our gratitude to the Illum Foundation for their financial support of this study.

Roskilde/Copenhagen/Amsterdam, October 2021

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More information on the projects behind can be found here:
DataPublics (funded by Velux Foundation):
https://ruc.dk/en/research-project/datapublics-transforming-journalism-and-audiences-age-datafication
AlterPublics (funded by Carlsberg Foundation):
https://ruc.dk/forskningsprojekt/alternative-media-and-ideological-counterpublics

Summary of Key Findings

- Conspiratorial Facebook posts are often characterised by postulates, sign arguments and rhetorical questions.
- Conspiratorial Facebook posts are frequently enmeshed in a highly emotional and pathos-oriented rhetoric that frequently features implicit statements of how one should fear the future.
- Corona-critical Facebook groups and alternative news pages are central actors in the online dissemination of online content that has been flagged as misleading or false by the Danish fact-checking organisation TjekDet.
- The impact of actors sharing conspiratorial content is substantially lower than that of actors spreading other kinds of misinformation. Conspiratorial content is more frequently shared by semi-public accounts, such as individual Facebook profiles as well as Facebook pages and groups pre-dating the COVID-19 pandemic.
- Less than 5% of all coded posts in selected corona-critical Facebook groups are categorised as conspiratorial, and the share of conspiratorial posts was highest in the early stages of the pandemic.
- Only 3% of the identified conspiratorial posts in corona-critical Facebook groups have been marked as misleading or false by external fact-checkers; automatic detection of conspiratorial content is hindered by the individualised nature of conspiratorial posts and users' attempts to hide from algorithmic screening.

Introduction: Context, Definitions and Scope

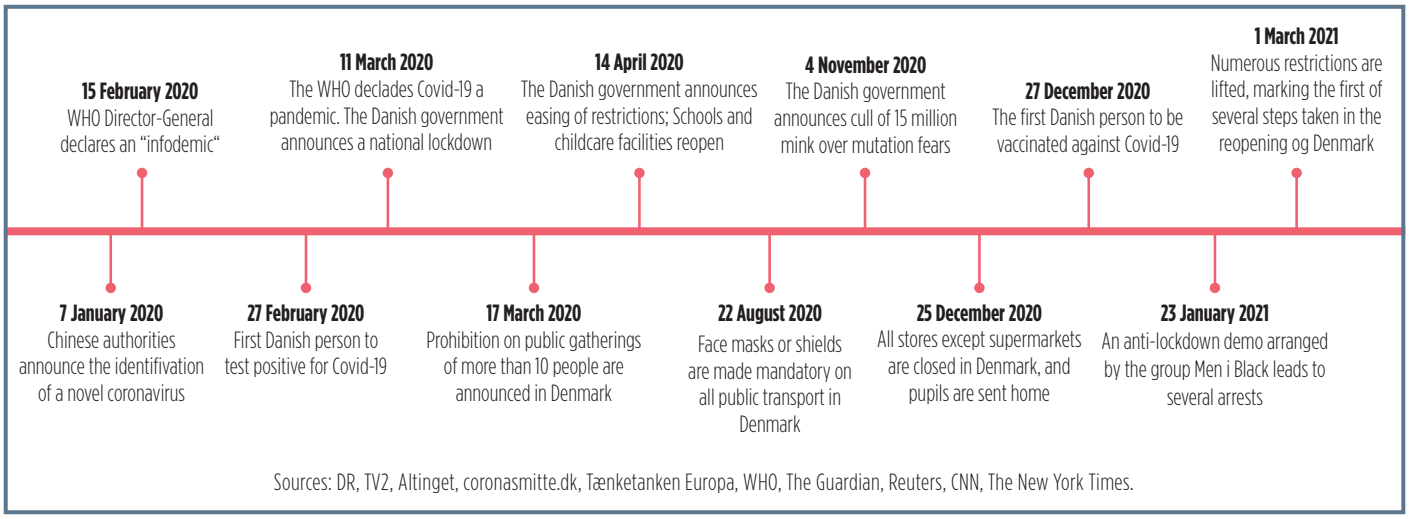
The word 'conspiracy' easily invokes notions of alien abductions, the JFK assassination and the moon landing – but also, in more recent years, the 9/11 terror attacks on the World Trade Center in New York City as well as the COVID-19 pandemic. In February 2020, the World Health Organization Director-General, Tedros Adhanom Ghebreyesus, stated his concern about the increasing amount of information in circulation, including mal- and misinformation, surrounding COVID-19: 'We're not just fighting an epidemic; we're fighting an infodemic. Fake news spreads faster and more easily than this virus, and is just as dangerous'.[1] The COVID-19 pandemic escalated from a simple battle against a disease to a full-blown controversy over who has the right and ability to tell the truth about the origins of and remedies for the pandemic. As time progressed, concerns about misinformation and 'fake news' transformed into conspiratorial theories and beliefs—a crucial trigger of the 'infodemic'.

As the historical references above reveal, conspiracy theories are not a new phenomenon; however, as Jaron Harambam notes, we seem to have entered an 'age of epistemic instability where societal conflicts over knowledge abound, and the Truth is no longer assured, but "out there" for us to grapple with'.[2] In modern societies, officially sanctioned truths are being increasingly contested, and previously trusted epistemic institutions, such as health authorities and mainstream media, are facing challenges with respect to their integrity and ability to actually describe the truth. Many scholars have ascribed a central role to the internet—and particularly social media—in compounding the amount of conspiration in societies, as it has rendered information more accessible and easily spreadable. [3] [4]Yet, others have argued that conspiracy theories have gained visibility in the age of the internet but have not necessarily become more dominant or numerous. [5]The COVID-19 pandemic has revitalised this discussion, and extensive debate has emerged in regard to whether the conspiracies have multiplied during the pandemic and, in particular, how they manifest and are spread via social media.

A 2018 YouGov and Cambridge University nationally representative survey on conspiracy beliefs in the United States and eight European countries (United Kingdom, Poland, Italy, France, Germany, Portugal, Sweden and Hungary) showed that conspiracy theories are not just popular in the US. According to that poll, 30 percent of the German, French, Swedish and British populations "believed their government is hiding the truth about immigration" (Harambam, 2020).

An infodemic refers to an excess of information, including false and misleading information, in digital and physical environments during a disease outbreak. It causes confusion and risk-taking behaviours that can be harmful to health. It also leads to distrust in health authorities and undermines the public health response (https://www.who.int/health-topics/infodemic).

Timeline: The Covid-19 pandemic in a Danish context



Sources: DR, TV2, Altinget, coronasmitte.dk, Tænketanken Europa, WHO, The Guardian, Reuters, CNN, The New York Times.

While the term 'conspiracy theories' is (once again) pervasive—especially due to the COVID-19 pandemic—its precise definition remains elusive. In layman and public debate, critical voices are often quickly dismissed as 'conspiracy theorists'. This negatively charged label produces mental images of tinfoil hats and signals flawed and irrational thinking.[6] As it can easily become a political tool to de-legitimise certain groups in society, scholars have warned against unreflective usage of the label 'conspiracy theorist' and called for clearer definitions and caution when employing such categorisation in research and public discourse.[7,8,9] However, academic discourse also lacks a straightforward definition of 'conspiracy', as research on conspiracy theories spans multiple disciplines. The present report is informed predominately by Douglas et al.'s [10]thorough review of the relevant literature as well as the Conspiracy Theory Handbook[11], which was produced as part of the major European project Cost Action Comparative Analysis of Conspiracy Theories (COMPACT).

Defining conspiracy

Conspiracy, conspiracy theory and conspiracy theorist

Lewandowsky and Cook[12] first separate the concept of conspiracy and conspiracy theory: 'Real conspiracies do exist… Conspiracy theories, by contrast, tend to persist for a long time even when there is no decisive evidence for them'.[13] Here, a conspiracy is understood to be 'a secret plot by two or more powerful actors' that aims to increase the power of those actors in society.[14] The Watergate scandal is a famous example of an uncovered conspiracy.

Conspiracy theories are 'attempts to explain the ultimate causes of significant social and political events and circumstances with claims of secret plots by two or more powerful actors…While often thought of as addressing governments, conspiracy theories could accuse any group perceived as powerful and malevolent'[15]. Therefore, a conspiracy refers to an exposed causal chain of events, whereas a conspiracy theory is an allegation of a conspiracy that has yet to be confirmed or disproven.[16]

The concept of a 'conspiracy belief' describes when a person subscribes to

one or more conspiracy theories[17], while 'conspiratorial thinking' is an umbrella term for the traits associated with how proponents of conspiracy theories think. [18]The COMPACT project has identified seven traits under the uniting acronym CONSPIR and posited that conspiracy thinking has one or more of these seven traits: contradiction, an overriding suspicion, nefarious intent, the message that 'something must be wrong', a persecuted victim, immunity to evidence and re-interpretation of randomness. [19]This report uses the term 'conspiratorial content' to refer to content that exhibits one or more of these traits. The methodology section offers an elaborate description of our own categorisation approach.

Scholars have also explored triggers of conspiratorial thinking. In this regard, Lewandowsky and Cook have highlighted four factors: a feeling of powerlessness, the need to cope with threats, a desire to explain unlike events and a position of disputing mainstream politics. [20]In addition, the current situation of a worldwide pandemic has been previously connected with more conspiratorial thinking during, for example, the 2009 pandemic of H1N1 influenza [21]or even the Spanish flu pandemic more than a hundred years ago.[22] A surge in conspiratorial thinking is therefore expected; nevertheless, it warrants scholarly attention to both understand whether this case applies and, if so, which factors induce it and how it manifests. The latter inquiry has led many researchers to focus on the new aspects of the conspiracy environment, namely the increased online and platformised dimension. For instance, at this year's International Communication Association (ICA) conference, a panel titled 'Coronavirus Coverage and Conspiracy Theories: Content and Effects of Mainstream and Fringe Media Reporting During the First Year of the "Infodemic"' illustrated findings from several European countries. In Sweden, Andreas Önnerfors, a professor in idea history, published an article earlier this year entitled 'Konspirationsteorier och covid-19: mekanismerna bakom en snabbväxande samhällsutmaning'.[23]

Conspiracy theories during the COVID-19 pandemic

The conspiracy theory of the 'Illuminati', which is perhaps best known from the Hollywood movie Angels and Demons, states that a powerful world elite controls global politics through a global satanic government. Historically, the conspiracy has been connected with a range of symbols, such as pentagrams, goats and the number 666, the most famous of which is a triangle.

During the COVID-19 pandemic, both Danish Prime Minister Mette Frederiksen and Minister of Health Magnus Heunicke were accused of being part of the Illuminati after making a triangle symbol with their hands during press conferences. Donald Trump has also been accused of membership in the Illuminati after making the same gesture during his speeches.
The less cohesive conspiracy theory 'QAnon' originated from a user named 'Q' on the social media platform 4chan. The user

claimed to know the secrets of 'the deep state', which, in this theory, is comprised of a satanic and paedophilic elite within the political system. A specific theory regarding the paedophile ring is often referred to as 'Pizzagate'. One of the prominent figures connected with this conspiracy theory is the former presidential candidate Hillary Clinton, and the former president Donald Trump is viewed as a hero who is spearheading the fight against the deep state. During the COVID-19 pandemic, a related theory has suggested that the coronavirus is in fact a direct attack on Donald Trump to undermine his efforts in battling the deep state.

The conspiracy theory 'Agenda 21' also started circulating more widely during the COVID-19 pandemic, as the pandemic was perceived as a convenient means to further the UN's agenda of a new world order. 'Agenda 21' refers to a UN agreement from 1992 which focuses on setting world goals concerning poverty, biodiversity and gender equality, amongst other themes. According to the theory, the UN agreement is really a cover for a plan to introduce a worldwide socialistic dictatorship. Today, it is also intimately intertwined with the current UN development goals.

The conspiracy theory 'The Great Reset', which is similar to 'Agenda 21', also experienced a revival during the COVID-19 pandemic. It states that a small international elite, which includes members such as President Joe Biden and Microsoft founder Bill Gates, are conspiring to introduce a worldwide communistic dictatorship. This theory argues that the COVID-19 pandemic is merely a cover for their plan to create the necessary circumstances to instal a communistic dictator.

A final conspiracy theory that has gained traction during the pandemic relates to the Order of Freemasons, a historic society that conspiracy theories often frame as a shadow elite who are in fact 'pulling the strings' in society. In the Danish context of the pandemic, conspiracy theorists have claimed there are links between the freemasons and COVID-19 through, for example, accusations that Prime Minister Mette Frederiksen and other key politicians are freemasons and that all political decisions are concluded not in parliament but instead amongst the freemasons, who are the true deciding elite.

The renewed scholarly attention to the rising level of conspiracy thinking not only relates to concerns about the specific implications of such conspiracy theories in hindering societal efforts to combat COVID-19 but also stems from a more general concern about the broader detrimental effects of conspiratorial thinking on society. Most scholarly work on conspiracy theories posits that they are harmful to society; for example, Douglas et al. have stated, 'we argue that conspiracy theories do more harm than good'[24], and Lewandowsky and Cook have presented the aforementioned handbook as a tool to combat conspiratorial thinking: 'In order to minimize these harmful effects, The Conspiracy Theory Handbook helps you understand why conspiracy theories are so popular, explains how to identify the traits of conspiratorial thinking and lists effective debunking strategies'.[25] However, they have also emphasised the dangerous potential of the 'conspiracy theorist' label to further polarise society.

The perceived threat of the internet as a breeding ground for misinformation and conspiracy has forced social media services to take a more active stand on their role in

disseminating misinformation and conspiracy theories and led to increased scrutiny of the types of content that they allow to circulate on their platforms. This development has resulted in heightened moderation of 'harmful' or 'fake' content on various platforms.[26]
A recent famous example of such moderation is Twitter's action against Donald Trump during the 2020 U.S. election, when the platform officially labelled several of his Tweets as misinformation and eventually banned him from the site. These new moderation practices by social media platforms have simultaneously revitalised discussions of how such moderation practices might also induce polarisation by contributing to the stigmatisation of certain people. Such circumstances have applied during the COVID-19 pandemic in Denmark as well, where critical voices have, for example, accused Facebook of censorship.

The Danish fact-checking organisation TjekDet

In Denmark, the act-checking media TjekDet TjekDet is vital to the moderation of online debates, as it functions as an independent third-party fact-checker for Facebook. In order to partner with Facebook, TjekDet is required to be certified by the international Poynter Institute and be a member of the International Fact-Checking Network (IFCN).

As an independent third-party fact-checker, TjekDet receives Danish-language content that Facebook's algorithm has flagged for potentially misleading information. This content is evaluated by the journalists employed by TjekDet, who are free to choose to fact-check claims and add one to add one of three labels to the content—'Missing context', 'Partly false' or 'False'—which then appears on the content when it circulates on Facebook. When TjekDet decides to attribute one of these labels to content, they must write an article that explains why the content is misleading, which is then displayed under the label on Facebook. Among other criteria, TjekDet prioritises fact-checking suspicious content with a high level of circulation when evaluating whether to proceed with flagging a post and writing a related article.

Next to their co-operation with Facebook, TjekDet also produces fact-checking articles that do not target Facebook content but instead address, for example, disputed statements by politicians or ongoing societal debates in the media, etc.

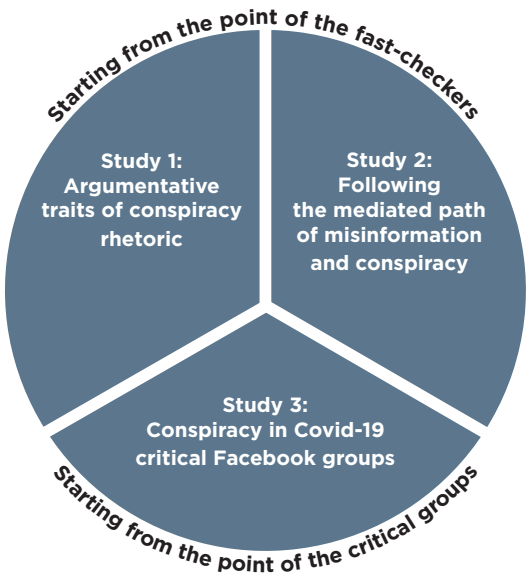
Read more about TjekDet:
https://www.tjekdet.dk/om-os
Read more about Facebook's ClaimCheck programme: https://about.fb.com/news/2019/12/helping-fact-checkers/

Methodology: A Three-part Study

The overall aim of this white paper is to describe how conspiracy theories have evolved and circulated during the COVID-19 pandemic in the Danish context. The paper combines various academic traditions and methodological tools to provide a nuanced and multi-faceted account of the state of conspiracy on Danish-language online platforms and on Facebook in particular, which is by far the most widely used social media platform in Denmark. The study consists of three independent but interrelated parts.

In Study 1, we analyse selected posts that have circulated on Danish Facebook profiles, pages and groups to characterise the argumentative traits of conspiracy rhetoric. In Study 2, we illustrate how false and conspiratorial content is disseminated on Facebook and other online platforms to better understand the actors and accounts that circulate conspiratorial content. In Study 3, we investigate three COVID-19 critical Facebook groups to examine the overall amount of conspiratorial content and whether it has increased in these groups during the pandemic.

Figure 1.1. Study design



Studies 1 and 2 analyse conspiratorial Facebook content based on information flagged as misleading or false by designated fact-checkers, whereas the third study employs a bottom-up approach by analysing all types of content published during the pandemic in selected corona-critical Facebook groups. Studies 1 and 2 utilise the same empirical material, which consists of Facebook posts mentioned in journalistic fact-checking articles written by TjekDet (see box). We include a total of 89 articles that have been written on the basis of these posts between January 2020 and May 2021. Some of the articles focus on a single post, while others refer to several thematically related posts. For Study 1, 10 clearly conspiratorial posts were selected. For Study 2, we specifically sampled posts containing links to external content (i.e. URLs, videos and photos). For Study 3, the

material consists of 2,527 posts collected from three public Facebook groups that openly declare a critical stance towards the Danish government's approach to handling the COVID-19 pandemic.

All three studies work with the same categories, whereby critical statements about COVID-19 and the handling of the pandemic are understood to be one of the following: (1) banal outbursts of dissatisfaction with the situation, (2) critical statements containing actual (though not necessarily compelling or factually correct) arguments, (3) anti-systemic criticism and (4) conspiratorial thinking. In Study 1, these categories guide a qualitative selection of examples of conspiratorial content. In Studies 2 and 3, the categories form the basis for a standardised categorisation of post content.

Table 1.1. Four types of critical statements

	Dissatisfied statements	Argumentative statements	Anti-system statements	Conspiratorial statements
General description	Uttering dissatisfaction with the current situation	Expressing doubt and critiquing concrete suggestions; Advancing arguments that are not necessarily very compelling; Misinformation may be part of the discourse	Critiquing the government or other elite actors; In opposition to the establishment and hegemonic power	Proposing theories about secret plots performed by powerful elites
Common traits and keywords	Immediate outbursts; Emotional expressions; Quick, negative reactions instead of arguments	Arguments for and against concrete handling of the situation; Supported, personal opinions Doubt, disagreement, arguments	Hostile, demonising attitude towards the establishment Fear of dictatorship, non-democratic control, propaganda, Gestapo, communism, corruption, powerful elite, cancel culture	References to masterplan or masterplot Pointing to hidden intentions and cover-ups Concrete theories (e.g. QAnon, The Great Reset, Agenda21, Pizzagate, 5G)

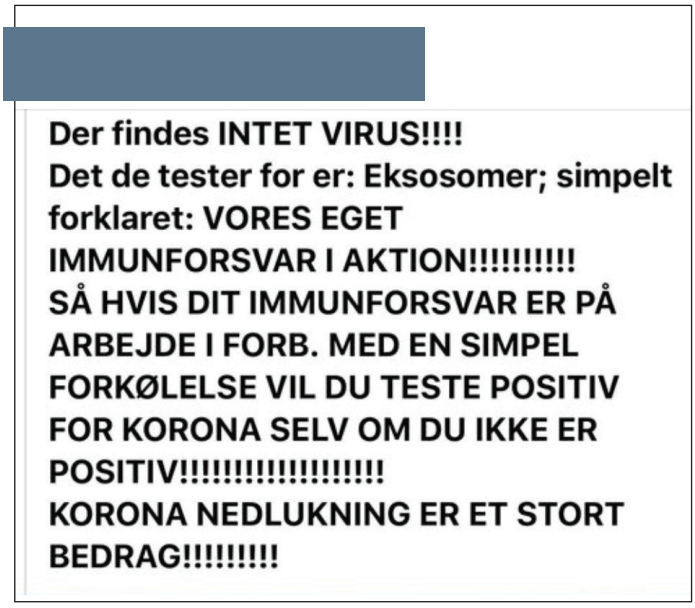
Study 1: Argumentative Traits of Conspiracy Rhetoric

This study qualitatively describes the basic argumentative traits of conspiracy rhetoric. The material consists of a selection of conspiratorial Facebook posts mentioned in articles by TjekDet.three public Facebook groups that openly declare a critical stance towards the Danish government's approach to handling the COVID-19 pandemic.

METHOD
The empirical material consists of a selection of 10 Facebook posts that contain conspiratorial statements either in the post content itself or in the attached material. We selected these posts by reading 89 articles by TjekDet and including posts mentioned in the articles that unequivocally contain conspiratorial content corresponding to the categories outlined above. We consider the material to be prototypical and argue that the reading of the specific posts is therefore analytically generalisable. Thus, the empirical material contains traits that do not exclusively apply to the specific material but to conspiratorial discourse in general. The qualitative analysis draws on rhetorical argumentation theory as a basic analytical framework.[27] [28]

The overall impression from reading the conspiratorial posts is that postulates dominate the discourse. Postulates are argumentative claims that ought to be supported by concrete grounds but are not. An example of the postulating discourse can be found in the post in Figure 2.1, which begins with the postulate 'There is no virus' and ends with another postulate, 'Corona shutdown is a great deception'. These controversial claims should have a clear basis yet are presented without any support.

Figure 2.1. Screenshot of a Facebook post containing several postulates



When arguments do appear in the conspirative discourse, they are often in the form of sign arguments, which support claims about conspiracies on the basis of various clues or symptoms. [29]In the example in Figure 2.2, a post shares content from the website corona-information.dk, which asserts that the pandemic is a conspiracy planned by a secret, powerful elite that wants people to be vaccinated. The clues in this specific sign argument are meetings prior to the outbreak.

The excerpt from the webpage below states, 'A few months before the pandemic, Bill Gates, the world's number one vaccine vendor, organised an event in New York City. Guess what the event was about? It was a "corona virus pandemic exercise". This pandemic exercise was called event201 and took place on the 18th of October 2019, just before the outbreak.' Further down the page, a meeting with the Danish Minister of Health is interpreted as another clear sign: 'Denmark's Minister of Health, Magnus Heunicke, "coincidentally" had a meeting that very same day with the Gates Foundation in Washington, three hours' drive from New York.'

Figure 2.2. Screenshot from corona-information.dk

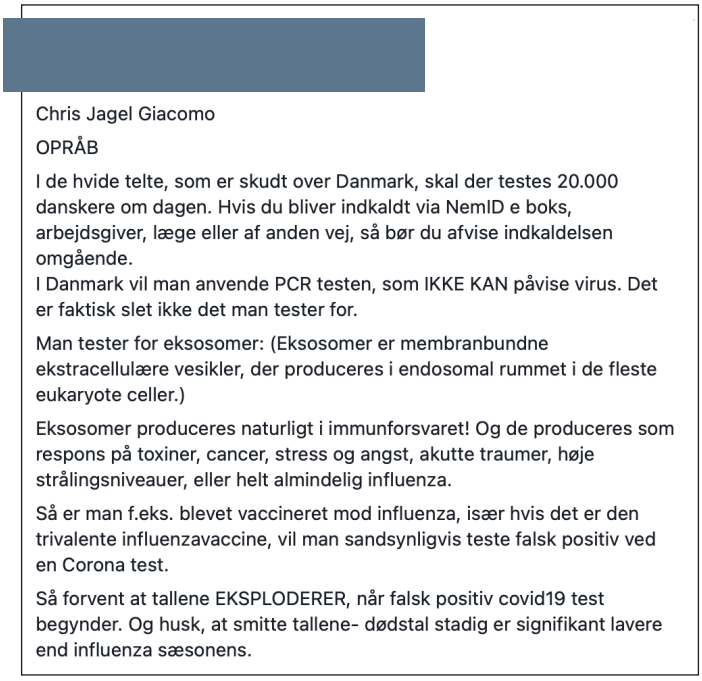
For most people, these sign arguments are not likely to be very compelling; however, for some people, they are convincing enough.

Sources that characterise conspiratorial discourse as 'over-interpretating evidence' and a 'reinterpretation of randomness'[30] reflect a negative evaluation of such sign arguments.

A third characteristic can also be found in the example in Figure 2.2, namely the strong presence of rhetorical questions. Such questions are an argumentative technique which, in this case, is used to convey speculation without directly claiming the existence of a conspiracy. In addition to the title, 'COVID-19 planned?', the webpage contains several other rhetorical questions, such as 'Why are thousands health professionals all over the world saying that the pandemic is a crime?' and 'Where did the virus come from?'. While no statements are explicitly presented, the readers are invited to reflect for themselves. This strategy sows doubt by spurring scepticism followed by the readers' own conclusions.

Fourth, the conspiratorial posts are often emmeshed in a strongly emotional and pathos-oriented rhetoric of fear, which frequently incorporates implicit statements that one should fear the future. It can be characterised as an extreme form of a rhetoric of collectiveness against a shared enemy. Often—and somewhat surprisingly—this emotional and pathos-oriented rhetoric is combined with the use of technical terms, which creates tension and establishes the sender as simultaneously highly emotional and extremely intellectual. In the example in Figure 2.3, the post starts with the emotional word 'EXCLAMATION' and then continues with technical terms, such as 'exosomes' and 'toxins', before concluding with more emotional appeals stating that the numbers will 'EXPLODE'.

Figure 2.3. Screenshot of Facebook post containing emotional and pathos-oriented rhetoric in combination with technical terms



Finally, a unique trait of the conspiratorial discourse is the use of **'**ad hominem' arguments that attack public institutions. Such arguments are popularly described as 'going after the man, not the ball' or 'attacking the arguer, not the argument'. The conspiracy discourse holds a generally negative view of societal and epistemic institutions, such as the government, research institutions, health authorities and journalistic media, which can also be regarded as a general 'anti-systemic' approach. The post in Figure 2.4 is an example of this argument, where the sender suggests a connection between 5G mobile masts and local outbreaks of COVID-19. At the beginning of the post, the sender speculates about the role of public institutions and their potential involvement: 'It is thought-provoking that public media and authorities ignore the health hazards of 5G in test enters in Helsingor, Nord Italy, Milano and the Hubei province in east China, and Wuhan. And in the rest of the world!'

Figure 2.4. Screenshot of Facebook post accusing public institutions of ignoring the connection between 5G and local COVID-19 outbreaks

KEY FINDINGS:

Conspirative discourse is characterized by postulates, sign arguments, rhetorical questions, emotional and pathos-oriented rhetoric and contains 'ad hominem' arguments towards elite institutions. The argumentation is obviously not very strong or deliberative and will probably not win sceptics over. Yet, some people find the conspiratorial rhetoric appealing, and we may have to combine the rhetorical insight with some of the psychological, political and social factors in order to explain why some people are attracted to conspiratorial thinking.[31]

Study 2: Following the Mediated Path of Misinformation and Conspiracy

This part of the research explores how external content flagged as misinformation has circulated in Facebook's 'public spaces' (i.e. public Facebook pages, groups and profiles) and progressed to other social media platforms during the COVID-19 pandemic. The purpose of this study is to map out the central actors and spaces responsible for spreading misleading, false or conspiratorial information.

METHOD

This study draws on links to external content (i.e. URLs, videos, photos) in posts that were labelled false or potentially false by TjekDet between January 2020 and May 2021 based on their circulation on Facebook. The analysis excludes posts in which the external link or embedding was no longer accessible and posts that did not contain any links. The analysis is partly based on a total of 66 links to external content shared on Facebook and labelled as missing context, partly false or false. All links were manually coded according to the categorisation above, and seven links were classified as conspiratorial.

Due to limitations to accessing Facebook's API as well as reasons of privacy, it is only possible to trace how the content has moved between groups and profiles that are public. Consequently, the analysis targets only actors and content which are considered public by at least some operational standard on a given social media platform. Such material includes Facebook pages and groups, Twitter accounts, Reddit comments, public Instagram profiles, websites and Facebook profiles that are configured to be fully public on their respective platforms. Of the 66 links, only 49 were publicly shared more than once. Some content, especially that which is native to Facebook (e.g. a photo uploaded by a private profile) might have been shared only by other private profiles.

To map the spread of information and gauge its reach, each shared link is considered in relation to its impact. If a post received many likes or retweets, or if the actor sharing the link has many followers, then it is concluded to have a high impact. The Appendix offers details about the calculation of impact scores.

To further demonstrate the impact of groups of actors on the dissemination of content, their activity can be projected as a bipartite network. In this network, each node is either an actor (e.g. a Facebook page) or a link that has been shared. If an actor has shared a link, a connection between the actor and the link is added to the network. We used the open-source tool Gephi to visualise the network and highlight important details, such as distribution clusters.

Figure 3.1 illustrates the total impact of each account type included in this study. Account types include public Facebook groups, Facebook pages, Facebook profiles, Twitter profiles, Reddit comments, Instagram profiles and web pages. If a link was shared by any one of those accounts, it is represented in Figure 3.1.

Figure 3.1. Impact on the dissemination of misleading and false content (by account type)

Since all original links were from Facebook posts, Facebook naturally emerges as the platform with the largest impact by far on the dissemination of potentially false information. Still, the low impact of the other platforms reflects that most of the external content labelled as misleading on Facebook was contained to Facebook and had only a limited public impact on other platforms. Moreover, the results reveal the relative influence of groups compared to pages and profiles on Facebook with respect to the dissemination of flagged content.

Table 3.1 displays a list of public accounts with the highest impact on the dissemination of misleading and false information. As expected, many of the top accounts are Facebook groups dedicated to alternative medicine, anti-corona restrictions or anti-mainstream perspectives as well as Facebook pages of alternative news media (e.g. NewSpeek Networks, dkdox.tv). Many groups, such as the top-rating 'Vi siger nej til tvang' (originally started as 'Vi siger nej til tvungen brug af mundbind' in August 2020), only formed during the pandemic. Facebook profiles with a semi-public status had a subordinate role and, for privacy reasons, are not listed by their full name.

Somewhat surprisingly, the Danish tabloid magazine Se og Hør is featured near the top of the list. This magazine only shared one piece of news which was labelled potentially false; however, because their number of followers far exceeds those of all other accounts on the list, the magazine registers a high relative impact. The ranking of Se og Hør is a testament to the effect that false information can have when it is promoted by mainstream media. Nevertheless, an impact can still be achieved with a low number of permanent followers, which was the case for 'Støt Læger uden Sponsor' (<600 followers).

Table 3.1. Public accounts with the highest impact on the dissemination of misleading and false information

Actor Name	Account Type	Impact Index
Vi siger nej til tvang.	facebook_group	100
SE og HØR	facebook_page	27.5
SOS-Meditationer (Epidemiloven)	facebook_group	9.9
NewSpeek Networks	facebook_page	8.9
Stop aflivning af sunde mink	facebook_group	8
Selvet.dk	facebook_page	8
Konspiration DK	facebook_page	5.7
Medicinaldemokratiet “Vi kører Danmark i sænk - sammen”	facebook_group	4.3
Spørg en læge om coronavirus	facebook_group	3.8
Støt Læger uden Sponsor	facebook_group	3.6
De Visionære - Debatgruppen	facebook_group	2.9
Levende mennesker (Hoved gruppe)	facebook_group	2.8
Frihed	facebook_group	2.5
dkdox.tv	facebook_group	2.5
Tisvildeleje hele året	facebook_group	2.1
Stop 5G Danmark	facebook_page	2
Levende mennesker - Backup gruppe 2	facebook_group	1.7
The Danish Defence League	facebook_page	1.5
Staten passer på dig.	facebook_page	1.4
Anne Merete Vase	twitter_account	1.4
Levende mennesker dødstals gruppen	facebook_group	1.4
(Private Person)	facebook_profile	1.3
Folkebevægelsen VITA <3	facebook_group	1.2
(Private Person)	facebook_profile	1
(Private Person)	facebook_profile	1
nej tak bare nej tak.....	facebook_group	0.9
(Private Person)	facebook_profile	0.8
Folkets Stemme	facebook_group	0.8
(Private Person)	facebook_profile	0.7
(Private Person)	facebook_profile	0.7

Actor Name	Account Type	Impact Index
(Private Person)	facebook_profile	0.7
(Private Person)	facebook_profile	0.7
NEJ TIL TVANGSVACCINERING	facebook_group	0.7
(Private Person)	facebook_profile	0.7
OOC Organisationen til Oplysning om Corona	facebook_page	0.6
Roskilde KommunalDEBAT uden Filter	facebook_group	0.6
(Private Person)	facebook_profile	0.6
Christian Nørremark	twitter_account	0.5
Begræns Elektrosmog	facebook_page	0.5
STOP 5G udrulning i Danmark	facebook_group	0.5
(Private Person)	facebook_profile	0.5
(Private Person)	facebook_profile	0.5

This picture changes substantially when we concentrate on actors who shared external content that is not only misinformative but, based on the categorisation in this study, is actually conspiratorial. The top-10 most impactful accounts that shared conspiratorial information registered substantially lower impact levels (see Table 3.2). The pages and groups with the highest impact were not related to COVID-19 but were in fact a page on conspiration theories, a group for a local community and a right-wing nationalist page, respectively. Moreover, private profiles and Twitter accounts now have a relatively higher impact. These observations suggest that conspiratorial information does not spread easily in spaces that are clearly perceived as public (e.g. pages and public groups) on social media.

Table 3.2. Public accounts with the highest impact on the dissemination of conspiratorial information

Actor Name	Account Type	Impact Index
Konspiration DK	facebook_page	5.7
Tisvildeleje hele året	facebook_group	2.1
The Danish Defence League	facebook_page	1.5
Staten passer på dig.	facebook_page	1.4
Christian Nørremark	twitter_account	0.5
Sur-Mand	twitter_account	0.4
(Private Person)	facebook_profile	0.3
(Private Person)	facebook_profile	0.2
(Private Person)	facebook_profile	0.2
(Private Person)	facebook_profile	0.2

The network displayed in Figure 3.2 illustrates the pages, groups and public profiles that became centres for the distribution of information flagged as misleading or false. Here, it is obvious that COVID-19 critical groups such as 'NEJ TIL TVANGSVACCINERING', 'Levende mennesker','Støt Læger Uden Sponsor" and 'Folkebevægelsen for Frihed' are at the centre of the network and have a key role in distributing the content.

The group "Spørg en læge om coronavirus", which aims to 'debunk' misleading information about covid-19, also appears in the network. This demonstrates that health experts, as well as fact checkers and other actors that try to correct false and misleading claims also can contribute to the dissemination of problematic content. A possible solution is to use screenshots of the original post to avoid contributing to the further dissemination of a false or misleading post.

Figure 3.2 depicts a cluster of public Facebook pages and groups at the bottom of the network which consists of many of same accounts that were at the top of the list in Tables 3.1 and 3.2. To attain such a central position in the network, an actor must have shared a piece of potentially false information multiple times. The network reveals a pattern whereby a tight-knit circle of public pages and groups act as central distributors. Private accounts then carry the information to the outer reaches of the network.

Figure 3.2. Network graph over the distribution of misleading and false information

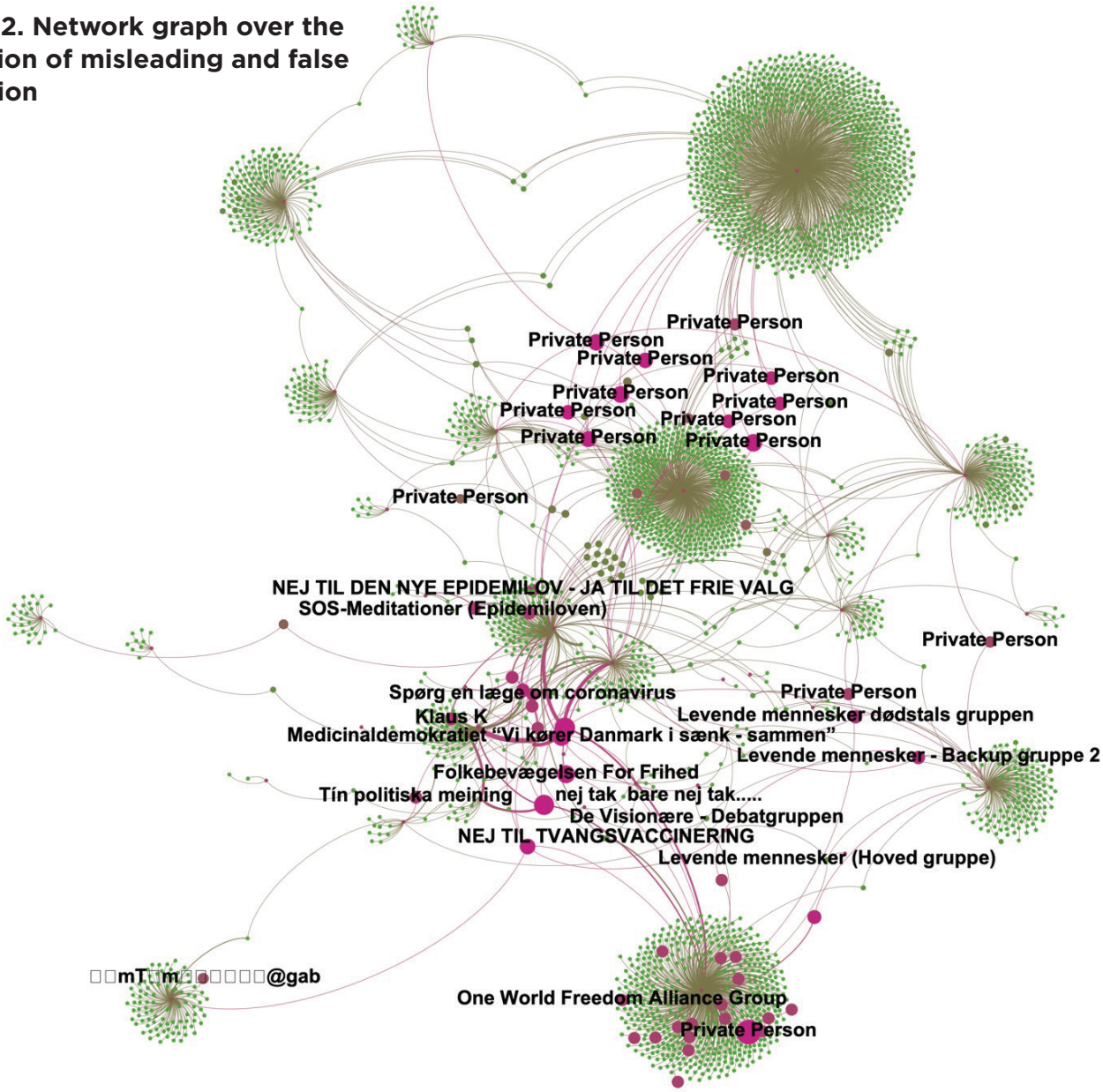
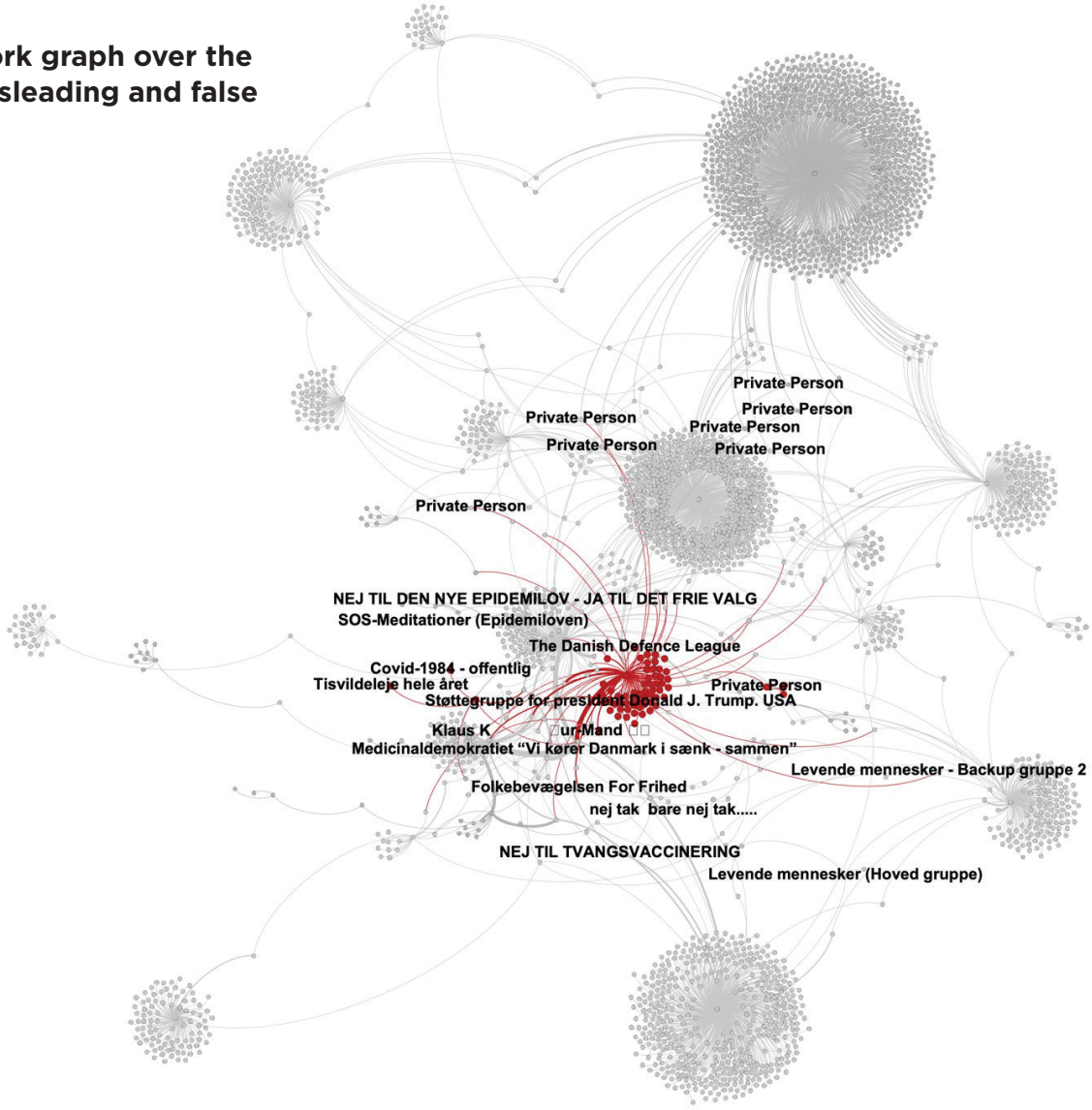


Figure 3.3 presents the same network but highlights conspiratorial information to visualise how the distribution of conspiratorial content originates from the same central cluster as in the first network. While conspiratorial information clearly has a lesser impact than that of 'regular' misinformation, the pages, groups and profiles that share conspiratorial information are not a separate network of their own but are in fact situated within the same centre of actors who distribute misinformation. It is worth noting that conspiratorial information assumes a central position and is disseminated via the same channels as information that is less conspiratorial but still misleading or false.

Figure 3.3. Network graph over the distribution of misleading and false information



KEY FINDINGS

COVID-19 critical Facebook groups and pages are central to the distribution of misleading and false information flagged by TjekDet during the pandemic. However, they play a subordinate role in the distribution of conspiratorial content. The impact of accounts sharing conspiratorial content is generally low. Such content is less visible on public pages and groups and more frequently shared by semi-public accounts and profiles.

Study 3: Conspiracy in COVID-19 Critical Facebook Groups

This study analyses the degree to which content posted in COVID-19 critical Facebook groups can be considered conspiratorial. It also investigates whether the share of conspiratorial posts has increased over time and how the other types of posts in these groups can be categorised.

METHOD

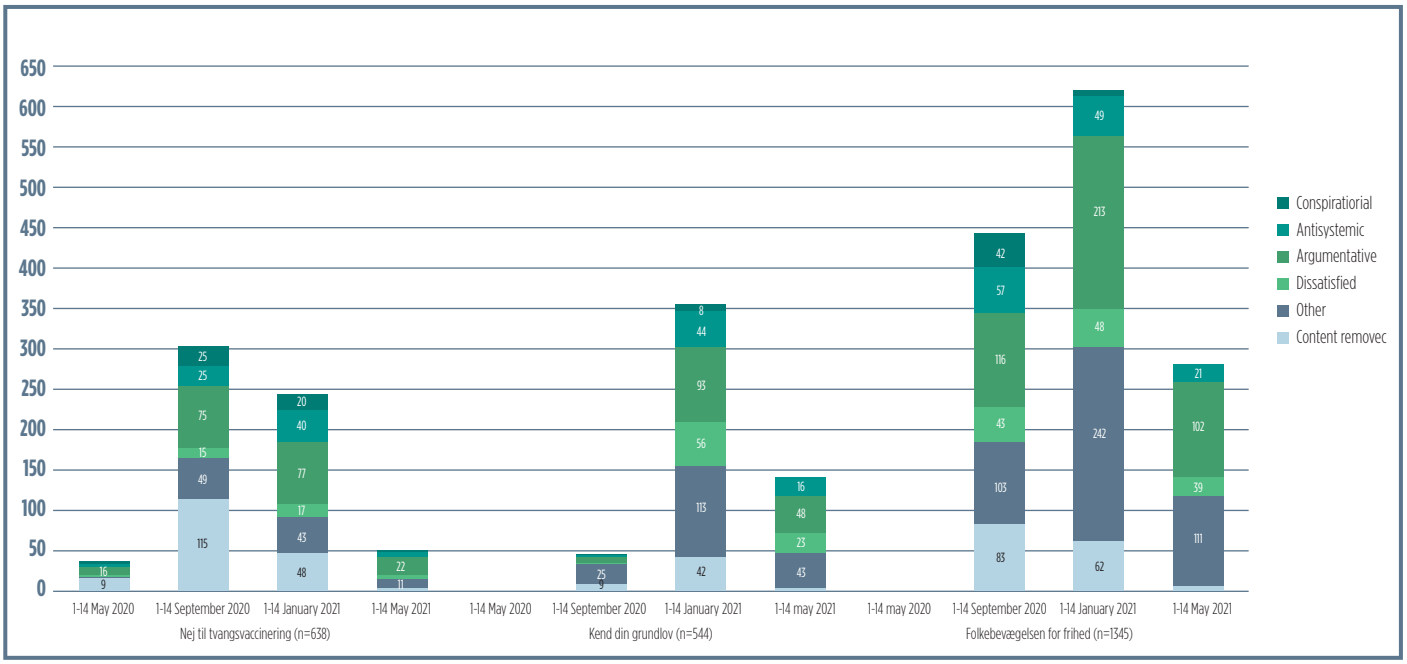
Study 3 analyses 2,527 posts collected from three public Facebook groups that openly state their critical stance towards the Danish government's way of handling the COVID-19 pandemic. This approach was chosen to analyse the development of conspiratorial content over time in a consistent fashion and without the disturbance of changes in Facebook's algorithm. Given that Facebook's underlying algorithmic system, which provides TjekDet with a list of potentially misleading content, is continuously evolving and improving, an increase in conspiratorial content here could possibly result from the ongoing refinement of the mode of detecting problematic content on Facebook. Three groups were selected for the case study: 'Folkebevægelsen for frihed' (The People's Movement for Freedom), 'Kend Din Grundlov' (Know Your Constitution) and 'Nej til tvangsvaccinering' (No to Forced Vaccination). The groups were chosen based on four criteria: the size of the group, the overall activity, the current activity and differentiation in topics. The Appendix offers more detailed information about the three groups.

Posts published within these groups were selected with the social media monitoring tool CrowdTangle, which provides historical data of public Facebook groups. To be able to illustrate a potential increase in conspiratorial content while still ensuring a manageable dataset, Facebook posts shared in these groups were collected during four two-week periods with three months between them (May 1–14, 2020, only two months after the official lock down of Denmark on March 11, 2020; September 1–14, 2020; January 1–14, 2021; and May 1–14, 2021). The analysis includes all posts that were shared in the groups in these four time periods. However, only one group was already active by the first time period.

To determine the degree to which they can be considered conspiratorial, all posts were manually coded based on a quantitative coding scheme ranging from 1 (dissatisfaction) to 4 (conspiracy), as described above. The coding procedure was tested for reliability between two coders, who independently coded an identical sample of the material (100 posts). Reliability coefficients (Krippendorff's alpha) were satisfactory for all coded variables.

Figure 4.1 provides an initial overview of the 2,527 posts that were collected from the three Facebook groups within four time periods of the COVID-19 pandemic. The three groups differ in post activity, overall and over time. 'Nej til tvangsvaccinering', the oldest of the three groups, peaked in September 2020 and January 2021, before mass vaccination efforts commenced. 'Kend din grundlov' registered their highest level of post activity by far in January 2021 during the second wave of the pandemic, which had prompted a tightening of restrictions. 'Folkebevægelsen for Frihed' also peaked in January 2021 but generally exhibited a comparatively high level of activity in all periods.

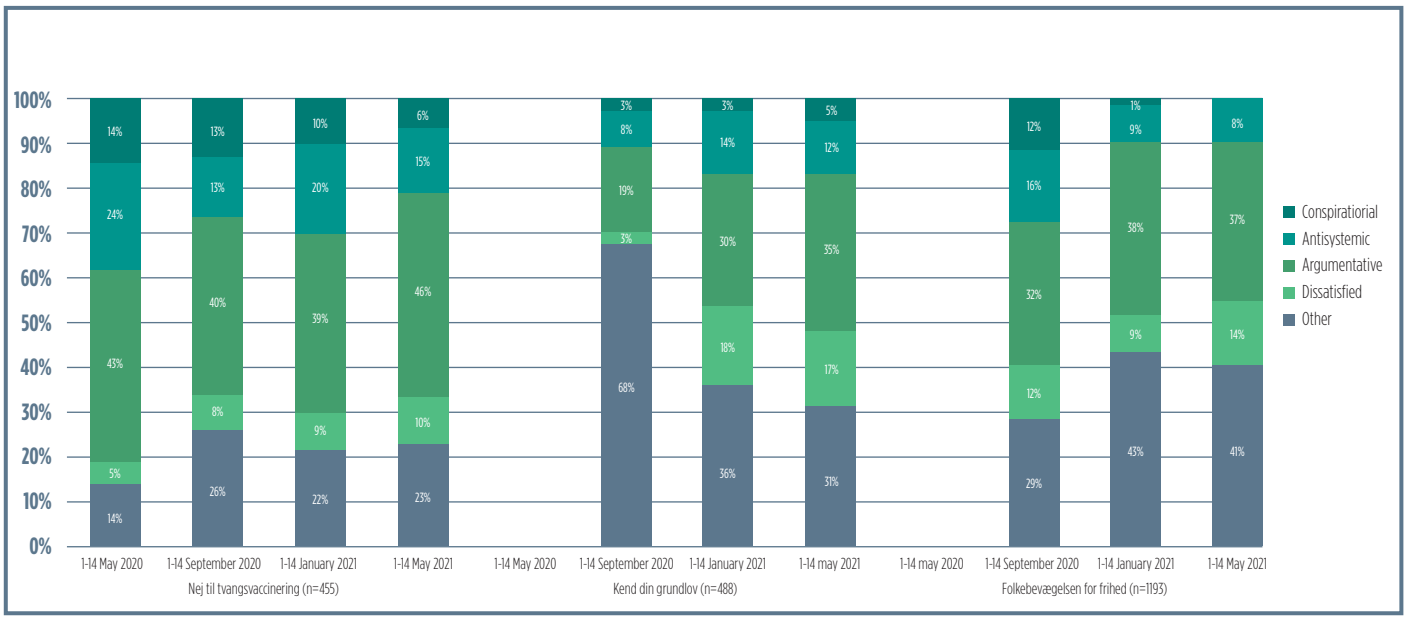
Figure 4.1. Types of statements in corona-critical Facebook groups



Overall, only 116 of the 2,527 coded posts (<5%) were categorised as conspiratorial. Eleven per cent (267) were classified as anti-systemic, while 30% (762) were argumentative, and 10% (248) were dissatisfied. In addition, 29% (743) were categorised as 'other', and 15% (391) were no longer fully available because the entire post or parts of the post (e.g. an embedded video or a shared post) had been removed.

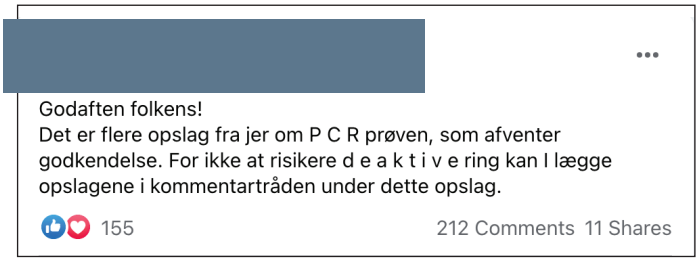
The relative distribution of the nature of posts (excluding the posts for which content was no longer fully accessible) reveals that the three groups differ in their levels of conspiratorial content (see Figure 4.2). The share of outright conspiratorial posts was generally the highest for 'Nej til Tvangsvaccinering' (11% of all non-removed posts). In 'Kend din grundlov', conspiratorial posts accounted for only a fraction of all posts in the group (3% of all non-removed posts). Overall, post content in this group became more dissatisfied and critical over time, as evidenced by the decline in 'other' posts, because the focus of the group gradually shifted from discussion of legal paragraphs to more COVID-19 related matters. Finally, conspiratorial posts were most prevalent on 'Folkebevægelsen for Frihed' in September 2020 (12%) and virtually absent from this group during the other periods. Overall, 5% of all posts from the group were classified as conspiratorial.

Figure 4.2. Relative share of conspiratorial statements in corona-critical Facebook groups



Notably, there was no apparent increase in conspiratorial posts over time in any of the three groups. Conspiratorial posts decreased in 'Nej til Tvangsvaccinering' and 'Folkebevægelsen for Frihed' in terms of both absolute number and relative weight, and they were stable at a very low level in 'Kend din grundlov'. This finding is even more remarkable given that the number of posts with fully or partly removed content was substantially higher for the earlier time periods (see Figure 4.1). While there are many possible reasons for the content's removal, it can be assumed that at least some additional conspiratorial posts were subsumed under this category, as users are particularly prone (or forced) to remove content that is perceived as problematic or controversial or has been called out by fact-checkers. Another explanation could be that, in the face of potential deactivation, group moderators gradually become more reluctant to accept posts that violate Facebook's community standards (see Figure 4.3). This trend would indicate that moderators adapted to platforms' introduced policies and rules and their algorithmic moderation.

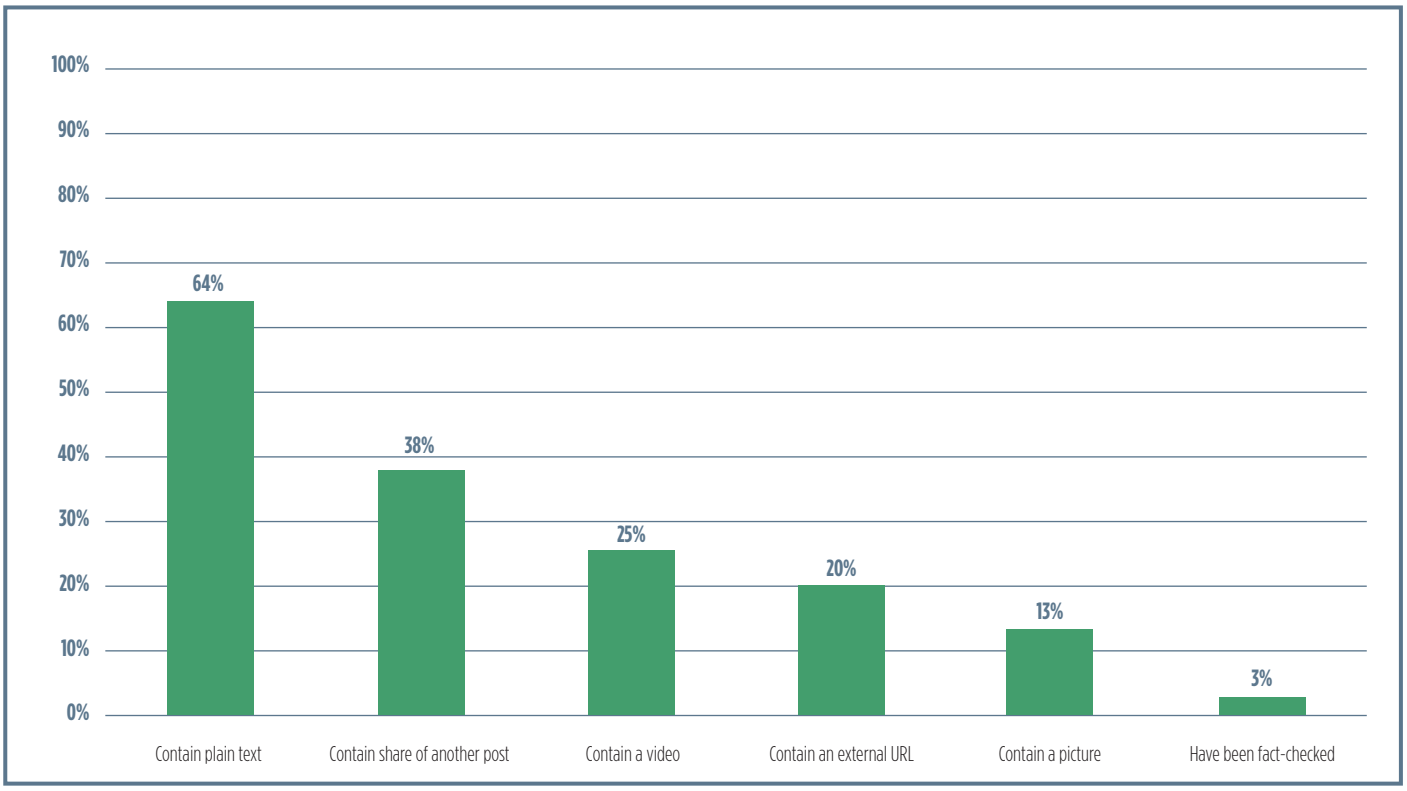
Figure 4.3. Screenshot from Facebook group 'Folkebevægelsen for Frihed'



Good evening, folks! There are several posts from you about the PCR test, which await approval. To avoid deactivation, put your posts in the comment thread below this post.

Figure 4.4 more closely considers some of the structural characteristics of the 464 posts that were identified as conspiratorial across the three Facebook groups. While the conspiratorial nature of a post often results from the interplay of several post elements, the displayed distribution of post elements reveals certain overarching characteristics of typical conspiratorial posts. For instance, more than 60% of the identified conspiratorial posts contained plain text written by the individual user, which indicates that conspiratorial thinking is, in many cases, either directly engrained in the user's own post comment or in a comment on content relayed by a third party. Relayed content in conspiratorial posts was most often in the form of a forwarded post by another user rather than in posted videos, photos or external links.

Figure 4.4. Characteristics of conspiratorial Facebook posts (n=116)



Note: posts can contain more than one of the listed elements

Noticeably, only 3% of the identified conspiratorial posts were marked as misleading or false by external fact-checkers, which suggests that the automatic detection of misinformation and conspiracy theories is more inclined to identify false and misleading information that is distributed in an (almost) identical form by many users (e.g. by sharing external links or forwarding chain letters) rather than conspiratorial statements by individual users, which can often be highly personalised, fluid and coded in nature.

KEY FINDINGS

Outright conspiratorial posts in COVID-19 critical Facebook groups have been rather limited in number during the pandemic and were most prevalent in the early stages of the pandemic. Danish COVID-19 critical Facebook groups are generally characterised by extensive argumentative criticism and varying levels of anti-systemic messages, and they are used less often to plainly voice dissatisfaction. Conspiratorial thinking is most frequently embedded in a post's plain text, which, because of its individualised and coded nature, is difficult to detect with automated fact-checking procedures.

Conclusion and Discussion of Results

This white paper has examined the presence, characteristics and dissemination of conspiratorial content during the COVID-19 pandemic in the Danish context. Taken together, the three parts of the study reveal that conspiratorial content exists on Facebook, but its presence and impact is rather limited, even on pages and groups that are most likely to feature conspiratorial thinking during the pandemic. Non-conspiratorial misinformation (in Study 2) and anti-systemic criticism (in Study 3) are indeed more characteristic of the content analysed in this study. Of course, misinformation and anti-systemic stances are not harm-free, and our findings should not be taken as evidence that Facebook content during the pandemic has been largely unproblematic. Still, it is important to avoid unequivocally labelling all problematic, critical and sceptical content 'conspiratorial'.

By cross-referencing the dissemination of links across Facebook as well as other platforms, it is possible to map and highlight actors and places that participate in the sharing of potentially false information (as defined by TjekDet). This study documents the existence of a cluster of Facebook spaces (mostly groups) that often share contested pieces of information with the assistance of a score of private accounts across Facebook, Twitter, Instagram and Reddit. However, pieces of information that are downright conspiratorial are rarely shared on public pages and groups. Earlier research has reported that many public discussion forums with no overt political agenda can easily become distributors of politically laden content, such as conspiracy theories, although this phenomenon does not seem to be common in the Danish social media sphere.

Nevertheless, conspiracy theories can have a cultural impact, and their significance may be more accurately described in terms of quality than quantity. Irrespective of their actual reach on social media, conspiracy theories are gaining recognition to such an extent that the term 'tinfoil hat' is now included in the Danish dictionary, and the public service channel DR has invited 'conspiracy folks' to develop and edit an entire television programme. In this context, the role of established media is key. As Study 2 has demonstrated, a single piece of misinformation can achieve a substantial reach on social media if it is distributed by a mass media page. Yet, if mass media dedicate attention to conspiratorial content which may only have reached a limited number of people on social media, conspiracy theories can potentially travel even further.

The attention to conspiracy theories has certainly been fuelled by observations and narratives regarding the rapid spread of conspiracy theories abroad. There is evidence to suggest that the level of conspiratorial thinking is lower in Denmark than elsewhere. Such relatively low visibility of conspiratorial thinking has been noted in previous studies reporting that few Danes are worried about or believe in conspiracy theories, which might be linked to the high level of trust in authorities and media. A study from 2018 revealed that less than 4% of respondents agreed fully with the conspiracy theory that 9/11 was an 'inside

job' perpetrated by the U.S. government. [32]In addition, Denmark has generally exhibited a high resilience to online misinformation thanks to robust public service media, a low level of societal polarisation and relatively strong trust in the news[33] as well as a well-established fact-checking ecosystem[34], which provides resources for citizens who are in doubt about possibly false content.

The methodological design of this research allowed for a broad study encompassing multiple angles and parts of the available empirical material. Yet, the study presents certain limitations that may have a bearing on the results. First, the analysis focused primarily on Facebook, as it is the most widely used social media platform in Denmark. Thus, the results do not account for the prevalence of conspiracy theories on other online and social media platforms. Second, data availability and research ethics limited the material to publicly visible content, which excluded private groups and fora. Third, the analysis of activity in Facebook groups does not account for comment sections, where conspiratorial thinking can be expressed more easily and out of the immediate view of the moderators. In combination, these considerations reflect a focus on those online spaces where conspiracy theories can reach the largest audience but may in turn find the least suitable conditions to thrive—though these 'least likely' spaces are still conspiracy-ridden in other countries. Finally, the analysis was limited by the short 'half-life' of conspiratorial content online. Given that we conducted our analysis in retrospect rather than continuously collecting our material, it is likely that some conspiratorial content posted in this period is no longer accessible. Nevertheless, in view of the pronouncedly low number and reach of outright conspiratorial content observed in this study, the methodological risk of underestimating the extent of conspiratorial content is unlikely to offset our results.

APPENDIX

Calculation of individual accounts' impact on the spread of misleading and false information

Each unique 'share' of one the 66 links is considered a unique post, regardless of which platform it was shared on. Thus, one of the 66 links was shared a total of 9,927 times by 7,649 unique users. Notably, we do not account for whether a Facebook profile and Instagram account is controlled by the same person. Each unique post is considered in relation to its potential impact on the spread of false information. The impact is calculated as which contains the following variables:

$$LOG_{FL} \cdot \sqrt{IN} \cdot KO \cdot EI$$

1. FL = number of followers of the account that shared the post.
2. IN = number of interactions with the post (e.g. reactions, retweets).
3. KO = level of severity of the false information based on the developed categorisation.
4. EI = the eigenvector centrality of the account within the network of all posts for the entire list of original links. The inclusion of this variable is based on the assumption that accounts that have shared multiple links from the original list have a larger impact on the dissemination of potentially false information.

Description of analysed COVID-19 critical Facebook groups

	Folkebevægelsen for frihed	Kend din grundlov	Nej til tvangsvaccinering
Size (members)	29.696 members	17.210 members	2.363 members
Activity (reference month)	1.101 posts	602 posts	266 posts
Topics	Government imposed restrictions, demonstrations, debate	Constitution of Denmark. law	Vaccinations

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