



Information about the COVID-19 pandemic – A thematic analysis of different ways of perceiving true and untrue information



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ABSTRACT

The COVID-19 pandemic is classified as an infodemic with the circulation of vast amounts of true and untrue information, especially through social media. The study's aim was to explore different articulations of people's understanding, handling and evaluation of (true) information, misinformation and disinformation in general and specifically linked to social media related to the COVID-19 pandemic, to illuminate the complexity of the construction of true information. A latent thematic analysis of qualitative data from an international web-based survey on COVID-19 and social media was carried out. The analysis resulted in five themes showing participants' understanding and assessment of what is deemed as (true) information, misinformation and disinformation. An underlying dominant medico-political discourse on COVID-19 was seen in the articulations about COVID-19. There were expressions showing that scientific knowledge and political viewpoints were met with both blind trust and scepticism, journalists' information represented a conglomerate of truth and lies, healthcare professionals' recognition vacillated between trusted and guessing experts, social media were an arena for all kinds of information, and the need for filtering information on COVID-19, although this was impossible as knowledge of COVID-19 was generally considered to be uncertain. What was understood as (true) information, misinformation or disinformation was dependent on the viewpoint of the information consumers and influences potentially affecting their perspectives. Social media could be used to support one's point of view, whether in line with the dominant medico-political discourse on COVID-19 or not.

1. Introduction

This article focuses people's articulations on information about COVID-19 in general and specifically related to social media. The current global coronavirus outbreak (Kinross et al., 2020) and its management on national and international levels presents people with unusual conditions, with subsequent short and long term consequences for the individual and society at large. The pandemic affects people, both infected and non-infected, in different ways, i.e. physically, emotionally, cognitively and behaviourally (Rothan and Byrareddy, 2020; Roy et al., 2020; South et al., 2020). Social media have become an ubiquitous tool for an increasing number of people and enable political, private, and professional uses, e.g. as a source of information, news, entertainment or networking (Ventola, 2014; Vraga et al., 2018). Facts and figures about COVID-19 can be found 'en masse', also in social media. The World Health Organization (WHO) (World Health Organization, 2020a, 2020b) highlighted the massive 2019-nCoV 'infodemic' that followed as a

response to the outbreak, making it hard to locate trustworthy information and reliable guidance. While some information is assessed as accurate from the position of the WHO, inaccurate information is regarded as harmful, e.g. through false claims relating to cures and preventative measures. While social media can be valuable to track pandemics (Li et al., 2020), they can also be a source of panic and confusion as they allow information, and misinformation, to travel fast (Depoux et al., 2020).

According to Bateson (Bateson, 1972), information is a difference, which makes a difference. Information can make a difference because the neural pathways along which information is continually transformed contain energy and are always ready to be triggered. By extension, (true) information, misinformation and disinformation are understood as information as such. It makes it interesting to understand how people relate to this vast amount of information about COVID-19, and how they handle and understand (true) information, misinformation and disinformation. Therefore, this study focuses on how people articulate their experiences

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and attitudes towards information about COVID-19 in general and specifically linked to social media.

1.1. Background

COVID-19 does not only affect the people infected by the virus. In principle, it affects all people since it has great implications for people's lives in general (Roy et al., 2020). The coronavirus threat presents us with a double hazard, namely a collapse of our subjectivity due to the risk of our body being infected and a collapse of our inter-subjectivity by social isolation of the self from others (Scalabrini et al., 2020).

COVID-19 and COVID-19 information to the people are closely connected. According to Søe (Søe, 2014), (true) information can be understood as the truth. However, there are two forms of true information. Partly, the natural meaning, where true objective facts in the world are independent of actors, and partly the non-natural truth, which is dependent on active actors and builds on conventions, meaning that it is a social, contextual truth (Søe, 2014). Misinformation is understood as the unintended false meaning of (true) information. It means that misinformation is false, although it may be believed to be true by those spreading it in good faith. It can also be posted in bad faith, or with a political goal in mind, but still concurrently be credited as true. Misinformation can come in many forms going from so called conspiracy theories to false remedy claims, and may lead to overreaction (e.g. hoarding), under-reaction (e.g. lack of protective measures), and ineffective and potentially harmful actions such as using ineffectual remedies (Pennycook et al., 2020). Disinformation is understood as the intentionally false meaning, which actors spread and know to be false (Søe, 2014). The WHO has a position in the world, which gives the organisation a formal and public right to produce and possess the truth on COVID-19. This kind of information can be seen as non-natural (true) information. The WHO can be regarded as a meaning assignor, with the mandate to declare a pandemic and define handling strategies on a global level (Holmberg, 2020). The organisation works hard to track and respond to false claims, as regarded from its position, with evidence-based information by monitoring COVID-19 related communication, including social media channels (World Health Organization, 2020a, 2020b). Just as COVID-19 went viral, (true) information, misinformation and disinformation through social media platforms such as Twitter (Brennen et al., 2020; Hollowood and Mostrous, 2020) and other platforms (Brennen et al., 2020; Scott, 2020) can go viral. Risk communication and community engagement, with rapid, regular and transparent public communication are seen as essential ingredients of public health interventions (World Health Organization, 2020a, 2020b). Lots of information from the position of the WHO (World Health Organization, 2020b) and national health boards (Nielsen et al., 2020) spread in social media, with e.g. the National Health Institutes (National Health Institutes (NHI), 2020) and Danish Health Authorities (Danish Health Authorities, 2020) supplying Facebook and Twitter with resources to encourage the practice of social distancing and the spreading of correct information from their point of view. Studies show that social media also spread a lot of information about COVID-19, which is assessed as misinformation and disinformation by this dominant medico-political discourse, and which can reach vast audiences through social media (Brennen et al., 2020; Hollowood and Mostrous, 2020).

Kabat-Zinn (Kabat-Zinn, 2020) shows that what circulates in the news are stories about what happened, i.e. a diversity of narratives that pass for news that are created and influenced by people and organisations with varying agendas. Further, the consumption of news requires mindful awareness, to notice how it affects thoughts, feelings and behaviours. The perpetual deluge of (true) information, misinformation and disinformation, whether man-made or bot-made, can be toxic, especially in combination with unawareness of what news really are and how they affect us, individually and collectively (Kabat-Zinn, 2020). Social media increasingly pervades daily life for political, private, and professional uses (Ventola, 2014; Vraga et al., 2018), facilitating such processes.

Smartphones allow anyone to witness and record events and to rapidly spread news to vast audiences, even if miles away from the originating event (Depoux et al., 2020; Kabat-Zinn, 2020). In that sense, social media users will contribute to the creation and circulation of narratives, with subsequent potential consequences on information consumers (Kabat-Zinn, 2020).

Many of the sources people rely on are accessed via the products and services offered by various platform companies, which are widely used as channels of e.g. news and information. All of them add to the COVID-19 'Infodemic' (Gallotti et al., 2004; Newman et al., 2019; World Health Organization, 2020a, 2020b). Facebook introduced a multilingual 'COVID-19 Information Center' on its main social network. Google Search provides an SOS Alert, new knowledge fora, and an information and resources centre for COVID-19. Twitter presents Coronavirus Tweets from news media and authorities (Nielsen et al., 2020). Little is known about how people understand, handle and sort (true) information, misinformation and disinformation in general and in social media specifically. Therefore, this article aims at exploring different articulations of people's understanding, handling and evaluation of (true) information, misinformation and disinformation in general and specifically linked to social media related to the COVID-19 pandemic in order to illuminate the complexity of the construction of true information.

2. Materials and methods

This article was a thematic text analysis of qualitative data consisting of free text comments from a recent international web-based survey with self-constructed questions, inspired by Braun and Clark (Braun and Clarke, 2006) and Søe's (Søe, 2014) concepts of types of information.

2.1. Data collection

The survey's main aim was to explore people's uses of social media related to information on COVID-19 and potential effects of such uses. The survey, available in 8 languages between April 7-28 2020, was answered anonymously and took approximately 10+ minutes to complete. It included 29 structured questions on people's uses of social media related to information about COVID-19 and effects of such uses, including nine socio-demographic questions. The questions had Likert-scale or multiple choice response alternatives, and each question was supplemented with unlimited text boxes for comments. The survey's quantitative data will be reported in a separate article. The survey, with accompanying information, was distributed through a public link on multiple social media platforms. No other inclusion criteria than age (≥ 18) were specified. Individuals coming across the survey were encouraged to share it with friends and acquaintances for a snowball effect. Out of the total sample's 943 participants who answered the survey, 651 participants replied with one or more comments. This resulted in a vast amount of qualitative comments that encompassed spontaneous information that went beyond the survey questions. These content-rich comments were spontaneous utterings related to COVID-19 that individual participants wished to share and they constituted this article's empirical material.

2.2. Participants

The current sub-sample consisted of participants who responded with free text answers and fulfilled the inclusion criteria ($n = 651$). It was largely similar to the total sample in terms of gender, age, education level and country of residence, see Table 1. Residents from 29 countries were represented in the sample, with mostly residents from Sweden (35%) and Denmark (32%). The number of comments per person was as follows: 57% responded with 1–3 comments, 22% with 4–5 comments, and 21% with ≥ 6 comments (range 6–16).

Table 1
Sociodemographic distribution of participants.

	n = 651	%
Gender		
Female	491	75
Male	159	24
Other	4	1
Age		
18–24	73	11
25–44	190	29
45–59	291	45
60+	97	15
Education		
≤10 years of schooling	12	2
High school or equivalent	65	10
Shorter higher education	70	11
Bachelor's or equivalent	195	30
Master's or equivalent	214	33
Doctoral degree or equivalent	80	12
Other	15	2
Employment		
Employed or self-employed	481	73
Unemployed	18	3
Homemaker	6	1
Student	81	12
Retired	44	7
Unfit for work	10	2
Other	13	2
Country of residence		
Sweden	227	35
Denmark	210	32
Faroe Islands	44	7
Pakistan	32	5
Norway	27	4
United Kingdom	15	2
Belgium	14	2
Switzerland	12	2
Italy	11	2
Other	62	9

2.3. Ethical considerations

The study adhered to the ethical principles of the Declaration of Helsinki (World Medical Association, 2013). Data was collected anonymously through a web-based, public survey link. Participation was voluntary. Written information about the study, including contact information to the researchers, accompanied the survey, with an approval box to tick online for consent to participate. The findings are presented on an aggregated group level.

2.4. Analytical strategy

The latent, thematic analysis was inspired by Braun and Clarke (Braun and Clarke, 2006) and Sjøe's (Sjøe, 2014) concepts of information types. This approach was chosen to understand how people articulated their understanding, handling and sorting of (true) information, misinformation and disinformation in general and in social media specifically. Firstly, all qualitative comments from the questionnaire were exported to a word document (103 A4 pages). All comments were treated as one text in its integrity. It was read through several times to get a thorough understanding and overall picture of its contents. All comments were treated as a unified narrative expression of spontaneously written responses to the questionnaire, and as such, the comments were considered as articulations on information about COVID-19. The analysis did not focus on individuals and their specific situation, neither on frequencies of articulations, but on the different patterns of articulations that arose in the text. Secondly, the comments were sorted through a process, where questions were used to break down and reduce the amount of the empirical material, and to code and reorganise the contents in accordance with the article's aim. The questions were inspired by Sjøe's (Sjøe, 2014) concepts of types of information, i.e. what did the individuals

write about:

1. (True) information about COVID-19?
2. Misinformation about COVID-19?
3. Disinformation about COVID-19?
4. The sources they used for getting/producing/sharing information about COVID-19?
5. How they evaluated information about COVID-19?

Thirdly, based on this reorganisation of the empirical material, five themes were constructed (see Table 2). These illuminate the participants' expressed apprehensions of different types of information on COVID-19 and social media. The themes were organised based on inherent similarities and differences as observed when sorting the empirical material based on the above-mentioned questions. To clearly illuminate the observed ranges of expressions on the subject, the respective themes encompassed expressions with different, and also contradictory contents on the same subject. Quotes from the empirical material served as illustrations of the analysis.

3. Findings

3.1. Between blind trust and scepticism towards scientific knowledge and political viewpoints

Experiences of reliable information were related to 1) a blind faith in the authorities, 2) a blurred basis for the current information and COVID-19 strategies, and 3) the individual's own belief. All articulations indirectly or directly indicated that COVID-19 existed and was an issue for humankind. In this light, the existence of COVID-19 could be regarded as natural (true) information. The communicated articulations nonetheless indicated diverging expressions of trust and apprehensions of information related to COVID-19 as true or untrue, ranging from blind trust in information from specific sources to scepticism towards the same. Largely, the articulations showed that individuals had great trust and confidence in information stemming from the WHO and the respective countries' national health boards. Information coming from those sources was often regarded as (true) information, in the meaning of a non-natural truth, dependent on the WHO and the contextual truth they represent. The articulations showed that individuals supported the national strategies, which were political choices in the respective countries of residence.

"There is a clear source of facts, the authorities."

"I limit myself to read and listen to official Italian and international governmental and scientific sources."

"I only source information from reputable and global organisations such as WHO and the health department/government sources in Australia and in the state of Victoria where I live."

However, other articulations also challenged understandings of the WHO as a global meaning assignor.

"This inhumanisation: For those who don't know it yet ... WHO was founded by the Rockefellers and the Rothschild and is currently funded by the Bill Gates' Foundation and China. Bill Gates, obsessed

Table 2
Themes.

Themes
<i>Between blind trust and scepticism towards scientific knowledge and political viewpoints</i>
<i>Journalists represented a conglomerate of truth and lies</i>
<i>Healthcare professionals' recognition vacillated between trusted and guessing experts</i>
<i>Social media as an arena for all kinds of information</i>
<i>Filtering contents - source criticism or a matter of taste</i>

with population reduction and owner of coronavirus patents, among others, wants to forcefully vaccinate the entire earth. He has planned an electronic tattoo to find out who has been vaccinated and who hasn't. Poucet [fairytale¹] to control the world's population, according to the UN's 20/30 agenda. An ID [identity] 2020 electronic vaccine."

Some articulations pointed to a general scepticism about the different nations' strategies, and as a result, not knowing what was right or wrong.

"Different countries have different responses to the same challenge. Not easy to get objective information. Not easy to get scientific information."

"I think there has been a serious level of under-information across the world. Which data and predictions have led the governments to the different strategies they have applied? One question I have not been able to find an answer to is how much the economic consequences have influenced the decisions in the different countries! "

Others expressed a national scepticism about information from national health boards and the government's management of the COVID-19 situation.

"I believe that Sweden's trust in their government has clouded their ability to critically hold their government accountable by asking the necessary questions on their lax policies. Sweden is an outlier in this epidemic, so they need to be more transparent. I do believe that Sweden may not take more action until there is greater international pressure with a critical eye on their policies, especially as the number of deaths continues to rise."

"Epidemiologists on Twitter & University pre-print publications. I trust their statistical models and opinions more than government advice. They sounded the alarm in January and were transparent, whereas I do not trust the government, which has changed its advice and been unhelpful. (US and UK governments to be exact)."

From this viewpoint, the WHO and worldwide governments spread misinformation about COVID-19. They grounded their information and COVID-19 strategies on the dominant medical knowledge base, often expressed in a traditional, positivistic manner with statistical numbers. Some articulations showed a general resistance towards the medical logic of the authorities' strategies. They were challenging and critical in a way that could be regarded as a paradigmatic fight.

"I miss knowledge about the strengthening of our immune system, the strengthening of our thoughts and feelings and its meaning in relation to disease. The official information channels have closed down for alternative inputs, but I think that there is great and useful knowledge [in alternative medicine]."

Further, the articulations showed a blurred basis for the current information and COVID-19 strategies. People got confused and interpreted the authorities' information as best they could. This implied a risk for misinterpretation or for assessing these sources' information as insecure and inclined towards misinformation.

"Although I find it relatively simple, I can imagine that the large amount of conflicting information, inaccurate information and confusing statements can lead to confusion among people who are

less able to find out what is going on. Neither the politicians, the media, or the scientists always do their job well in this regard."

Moreover, others expressed that the authorities' information was untrustworthy and a matter of belief. It meant that it was difficult to separate information from the authorities in (true) information, misinformation and disinformation. Nobody knew, and therefore, individuals had to take a standpoint similar to a point of belief as an argument for what information they believed.

"I don't think that any source is particularly reliable because no one knows much about corona. Everyone is just doing the best they can and advise the way they think is best."

"Everyone has their opinion, even the officials. You have to form your own truth."

Often, the governments were articulated as trustworthy and as such, they appeared as the authorities' extended mouthpiece during the COVID-19 pandemic. However, there were also articulations pointing to untrustworthy governments constructing disinformation.

"I also knew that the messaging about not wearing masks was geared to reduce the supply to Hospitals and First responders."

Politicians as a group were often articulated as untrustworthy, with a clear political agenda and an unscientific basis for their strategies.

"It is difficult to navigate what is scientifically initiated and what are purely political decisions and efforts."

"Besides the experts' statements, it is easy to realise that most of the information is direct guesses regarding the complexity of COVID-19. In addition, they [the politicians] are open with that they sometimes have to guess."

Overall, the different articulations indicated that information from the WHO, national health boards, governments and politicians, respectively, could be understood as non-natural, socially constructed (true) information, misinformation or disinformation, depending on the speech position of the commentator. Moreover, the articulations that challenged the dominant understanding of the medical rationale and the WHO were presented as (true) information from the speech position of those making these comments.

3.2. Journalists represented a conglomerate of truth and lies

Articulations about information related to COVID-19 as accessed through the media and journalists showed how such information was experienced and assessed. The articulations indicated that the format and contents of such information influenced its assessment. Further, how these aspects could contribute to reinforce or undermine the dominant narrative on COVID-19, and how the consumers of such information experienced this. Articulations expressed that journalists oscillated between conveying knowledge and creating sensationalism about COVID-19. It was seen in the newspapers:

"However, in some cases, info via the newspapers is also on the edge when it comes to credibility. The regular researched articles are ok, but among other things the leadership writers regularly write without the usual journalistic manners."

Moreover, it was noticeable on television.

"SVT [Sweden's Television] is okay, but very non-in-depth/uncritical information [...]. Above all, I lack facts. It's very much how you think and make statements in Swedish media - but not so much about explanatory models or scientific analysis of the situation (medically scientific). Economic/social science analysis, we are better at that."

¹ Footnote: Le Petit Poucet, or Hop-o'-My-Thumb as he is called in English, is a fictional character by Perrault. "According to Perrault's moral, parents typically value those of their children who are good-looking, big and strong. They usually do not think much of those of their children who are small, look weak and do not say very much. It is those children, however, who may turn out to be the saviours of their families." (Source: <https://literature.fandom.com/wiki/Hop-o%27-My-Thumb>, accessed 26 June 2020).

"I find some TV news sources reliable – e.g. BBC news. Other TV sources I find scaremongering and don't trust."

"My confidence in some media, especially DR [Denmark's Radio] is declining at this time. There are sensational stories and breaking news than there is in-depth journalism. I think that many stories are too simplistic in this, in so many ways, extremely complicated situation. The radio has lots of debates, but mostly with politicians and opinion makers, and here too it becomes simplistic."

In addition to the knowledge communicated by journalists, the way they did it was crucial to how information was perceived. It was articulated as important to be rhetorically well schooled to be persuasive and have the power to come up with a truth that was believed and listened to in the media.

"Only television and radio from people with ethos."

On the one hand, articulations expressed that the journalists had succeeded in disseminating factual information regarding COVID-19 in line with and as an extension of the dominant medico-political discourse. In that way, the journalists supported the population in handling COVID-19 by conveying non-natural (true) information from the dominant medico-political viewpoint. However, articulations also showed how this fact mediation reached a saturation point in the recipients, who expressed a sense of over-information. In other words, it was articulated that journalists were responsible for this COVID-19 over-information, the 'infodemic', which submerged all other contents and values in life.

"Close to information overload ... I have got a picture and perception of the disease that persist, despite lots of different information. However, I find it almost depressing to constantly be bombarded with information on disease progression, death rates, restrictions against the disease, and more ... As if there is nothing else in the world."

On the other hand, articulations indicated that journalists, on a par with the WHO, national health boards, governments and politicians, were responsible for the progress of COVID-19, and how the situation was handled due to poor journalistic research on COVID-19, virus propagation, and prophylactic measures. This deficient research led to the production of misinformation in the media.

"Absolutely none [reliable]. Because in Italy, for example, the vastness of the problem has not been fully understood. And no media or other sources have been able to investigate the problem in a timely manner."

"Media spread false information."

The articulations pointed to an understanding of information as unbalanced, and that overall, the media spread (true) information, misinformation and disinformation. However, it was difficult for the recipients to differentiate between true and false information.

"I find that a lot of misinformation is spread, even in the daily newspapers, television, radio, etc., if they are not direct quotes from an official, accepted organisation."

"An overall assessment of all media. No media is completely reliable. Far too much sensational writing and looking for negative information. Much is unbalanced."

"Too much non-constructive panic-filled information."

On the other hand, some articulations called for a critical journalistic voice as a counterweight to the dominant medico-political discourse about COVID-19.

"I think the media should differentiate between who delivers public service and who delivers critical journalism. It floats too much

together. A clear critical voice is needed, which does not at the same time work to convey the state's messages."

"[posted on social media] Lack of a general political analysis in a mass world of constant big news. Lack of mentioning the inefficiencies in tackling the virus from almost every country. Workers' lives at risk when profits keep on coming."

Taken together, journalists and the media were articulated as both an extended mouthpiece of the medico-political dominant narrative about COVID-19 and a critical, questioning voice in relation to this dominant discourse.

3.3. Healthcare professionals' recognition vacillated between trusted and guessing experts

The articulations showed much faith and confidence in health professionals, both among non-experts and healthcare professionals, and that the latter conveyed non-natural (true) information. Examples of how healthcare professionals expressed having great confidence in their own knowledge were:

"I am educated in the field (nurse) and therefore easily navigate through correct information."

"[Has reliable knowledge] colleagues from my workplace [and] employer, based on the nature of my work related to health and education."

Even the healthcare professionals' employers were articulated as persons/organisations who possessed non-natural (true) information about COVID-19 and how to handle the situation, which was passed on to the employed healthcare professionals.

"Since I work in the healthcare sector [hospital], I might be tempted to say my employer [has reliable information], as he will have access to [some] information that I may not necessarily read in the newspaper."

"The employer [has reliable information]. [I] relate to the region's routines in healthcare."

People outside the healthcare system expressed having great confidence in the healthcare professionals' knowledge and in their ability to provide (true) information.

"My dad works with it [COVID-19] and I get some accurate knowledge from him, but overall I think the authorities are unclear and confusing in their statements."

"Having a lot of scientists & doctors as my friends, I trust their opinions as well."

"[Reliable information] Friends in the hospital world."

Nevertheless, some articulations pointed to the fact that healthcare professionals could not be holders of true knowledge, because at the given time, it was impossible to know what (true) knowledge was. By extension, this could mean a dissemination of untrue information, and thus misinformation.

"I am basically not interested in the medical aspects of the pandemic as they are being communicated now because there is too little reliable information and too much guesswork. When, at some point, some well-researched empirical evidence emerges, I'm likely to be interested."

3.4. Social media as an arena for all kinds of information

In the survey, social media were defined as 'websites and applications that allow people to interact with each other and to publish, share and

exchange material. Examples of social media are Facebook, Instagram, Twitter, LinkedIn, etc.'. The articulations showed that social media represented an arena where all kinds of information could be accessed and shared, whether in line with the dominant medico-political narrative on COVID-19 or not, whether trusted or not. It was also a space where people could express all kinds of opinions and emotions related to the situation through more or less open or private social media platforms. In the comments, social media were articulated as a channel and not a source of information:

"I don't consider social media as a source but as a channel [of information]."

Social media were articulated as a channel of varied kinds of information, which was used a lot, sometimes, or not at all. Reasons for not using social media could be lack of faith in social media as an information channel or to avoid e.g. information overload.

"Only selective social media is reliable."

"I don't use any of these [social media platforms] to get information."

Social media were partly articulated as the extended voice of the international and national medico-political organs, as these organisations had their own accounts on social media platforms. Simultaneously, some of these organisations had the power to influence what could be published on social media regarding COVID-19, or in any case, which narratives about COVID-19 first appeared to readers through social media.

"Youtube = regular press conferences broadcast by official bodies such as the WHO. Facebook = links to official bodies."

"The WHO contacted social media earlier this year to try to reduce Fake News in connection with Corona. That's why "good sources" are pushed to the top of google + small messages in other apps."

Social media platforms were articulated as places where individuals posted whatever they felt like; information that was regarded as non-natural (true) information, misinformation or disinformation, depending on the recipient's position.

"On social media people post everything ..."

"Generally it can be said that channels/platforms contain both good and useful information, but also pure disinformation, own thoughts and conspiracies presented as some form of truth."

"I come across multiple opinions in diverse Facebook groups, which is a bit annoying since a lot of people don't seem to be able to distinguish between opinions and knowledge."

Among other things, there were closed Facebook groups for healthcare professionals, where experiences and advice were shared. Likewise, these groups served to ventilate frustration about the COVID-19 situation among health professionals.

"Among my hospital colleagues in the department, we have created a Facebook group where we communicate with each other as our email accounts are completely flooded with information."

Some articulations depicted healthcare professionals' social media posts as equivalent to quality, which must be seen in relation to the general trust in healthcare professionals, as described in 3.3.

"On Facebook, there is a group of doctors who answer questions. They also feel that they are reliable."

"Facebook groups of exclusively of UK doctors with their first-hand experience of managing patients in hospitals."

"I don't find Instagram or YouTube as useful for such topics. Twitter and Facebook are more useful for that since professionals working

with the pandemic/economics/etc. report their personal opinions through them."

Scientists also used social media posts to share their research, which were articulated as (true) information.

"Due to a preponderance of researchers in my twitter feed, there are many links to publicly available peer-reviewed studies and analyses by prominent researchers, so social media are a good gateway to reliable information."

Some articulations showed how posts in social media could support the dominant medico-political discourse of (true) information by sharing material that was in line with this understanding and through attempts at stopping the dissemination of other understandings of COVID-19.

"[publishes on SM] Counterbalance to a lot of misinformation and conspiracy theories abounding on Social Media. In addition, to inspire others to reflect. [I] am in the danger zone myself."

"[Reasons for posts in social media] To stop the spread of misinformation and stop the complacency of my peers, who are ignoring health advice. I saw early on the need for urgency and preparation, while others ignored it."

The comments showed that social media functioned as a channel to reach people and to inform others about what was considered as non-natural (true) information.

"I feel that a lot of the people who post on social media that I interact with tend to be scientists, who link reputable sources, scientific papers, etc. So I personally think that my social media feeds are quite reliable, but of course there are a lot of people out there spreading false information."

"[Spread information about corona] [I have] a feeling that people in my social circle still have no idea of the gravity, so maybe stories from real people could activate their common-sense and discipline, even if they themselves haven't seen the consequences of not following guidelines."

On the other hand, articulations showed that posts on social media provided resistance to people that were critical of or challenging the medico-political discourse. This occurred through attempts at stopping others from claiming so-called 'false' narratives, understood as mis- or disinformation from the speech position of those making these comments. Articulations showed that the utmost consequence was the exclusion of rebels as followers/friends in social media, if it was not possible to subject them to the dominant medico-political discourse on COVID-19.

"I have also posted a lot of comment for people sharing wrongful data!"

"I have blocked people who publish conspiracy theories and those who only portray things that go against Sweden's strategy, because they only take my energy."

Here, a self-refuting circle was seen, in which individuals denounced people that condemned others, and hence themselves condemned others. Opposite, articulations also showed how people excluded individuals as followers/friends on social media due to their moralising behaviour and argumentation for the dominant medico-political discourse.

"I no longer follow quite a few of my friends (about 20). I have deleted people [connections] because I get tired of people's judgmental behaviour towards others. The way people glorify their own behaviour. Their doomsday perception. I get tired and depressed from being hit in the head and constantly being told how to behave."

Doomsday prophecies were articulated as parts of the social media

contents. Such posts were dispatched as (true) information, and perceived as disinformation.

"I always have to sort out "crisis maximisation" articles."

"You get very tired of all the doomsday information that's coming all the time."

"[Posts on SM about] Concerns for mass hysteria and anti-democratic/liberal currents."

Although there were differences in what individuals understood as (true) information, misinformation and disinformation, what they understood as mis- and dis-information aroused feelings of unease and concern in themselves and their social network. Experiences of trustworthiness were articulated as dependent on the sender and/or personal relationship to the sender.

"[I] have found that many of my friends and family members are worried and they watch social media a lot and read about corona there. There are many websites that are not reliable, which disseminate false information, which make them even more worried."

"We are surrounded by different information, different opinions, anger, stress, profiteers, and personal interests."

"Whether information is reliable or not is very much about who posted it and who/what the original author is. I for instance trust an experience of the disease as described by a friend who is usually trustworthy, but if I do not know the person myself, I attach less value to her description or doubt its correctness."

Social media were also articulated as a way to follow people's narratives about COVID-19 worldwide. This was regarded as (true) information about people's lived experiences during the pandemic.

"I don't look for information about corona on social media but I find it interesting and also comforting to see how friends and people in different places around the globe are adjusting and coping with the situation."

"I talk to my friends and family in several countries and hear their personal experiences: America (New York, Colorado, Florida and Arizona), India, Switzerland, France, Spain, Germany, Czech Republic, Australia, Canada and Mexico. I hear about my family's and friends' experiences abroad."

Overall, the articulations showed intentions to balance sensational news, doomsday prophecies, scientific facts and medico-political strategies considered by the individual as relevant, true and in line with their own perception of the COVID-19 situation with actions at individual and structural levels that were deemed as good. Contrarily, there were also articulations indicating the insertion of alternative information and worldviews to the dominant medico-political discourse on the COVID-19 situation.

3.5. Filtering contents - source criticism or a matter of taste

Source criticism as such, and understandings of trust in COVID-19 related information, were subjects of multiple articulations. The articulations varied in what supported, or not, trust in specific information nonetheless. In the comments, it was articulated that nobody really knew anything about COVID-19. It was therefore important to be sceptical, cautious, and to do the best possible with available means in form of knowledge and resources at any given time.

"There is a lot of information about COVID-19 and I have to sort it through and get a picture of how things are. [...] Actually, the evidence is so poor so there is no certain truth. It is a new virus and then I think for the weaker 'better safe than sorry'."

Articulations called for source criticism in relation to all media, including social media, as a way to sort the information in (true) information, misinformation and disinformation.

"It's important to be critical of what is read. Especially as there is so much news going around now."

"We need to assess the sources to avoid running into false theories."

"You have to be critical of all information - who is the sender, what are their interests, etc. whether it is about Corona or not."

There were also articulations against the possibility to be critical of the information. It was difficult to be critical, as nobody knew what was right or wrong knowledge about COVID 19 and how to handle the situation.

"To me, it is not clear what is true or false about corona, and there may also be much that remains unclear. Partly because we do not yet fully know the disease and its nature."

"Trying to be critical of most things, and aware that there is still a lot we do not know - therefore information will be influenced by opinions (many different), questions, uncertainty, fears, and not least will they change frequently."

Family and friends were expressed as a support in sorting the information in (true) information, misinformation and disinformation. In that way, the understanding of (true) information, misinformation and disinformation also became an interpretation from a socially acceptable viewpoint, that was an expression from a social position.

"I ask friends and family with whom I share values and who spend more time on social media than I do."

Other articulations pointed to the perception of reliability of information as a matter of taste and interest.

"I get an idea of information that is interesting and sort it out."

"[Finding reliable information] By sorting, by instinct and/or intuition."

In short, the articulations pointed to a high awareness about the need and value of scepticism and source criticism regardless of source, not the least due to the current knowledge gap regarding COVID-19. However, for the same reason, it was difficult to be critical.

4. Discussion

Articulations of understandings, handling and evaluation of (true) information, misinformation and disinformation take on different expressions. This discussion focuses on three main findings. First, we discuss how articulations of (true) information, misinformation and disinformation are a matter of speech position and the right to own the 'right' truth. Second, we discuss articulations of how healthcare professionals are mostly trusted both among those who were not themselves healthcare professionals and among the healthcare professionals themselves. Finally, we discuss how social media supports the 'infodemic' about COVID-19 by being a arena for all kinds of information, which can reinforce or undermine the dominant medico-political discourse on COVID-19.

The findings show how articulations of (true) information, misinformation and disinformation are a matter of speech position, where the ones in the speaking position estimate that they themselves represent the (true) information. In that light, it is interesting to discuss the right to own the 'right' truth and how the construction of truth is a matter of position, and thereby a social construction. This indicates that it is difficult, or rather impossible, to operate with the classification of information described by Søe (Søe, 2014). The findings point to

understandings of information as intentionally or unintentionally true or false, and that they are closely linked to the position being spoken from. Further, they show how such speech positions can be in conflict with each other in these understandings. An unambiguous understanding of (true) information, misinformation and disinformation does not exist as these understandings are socially constructed and attributed different meanings in relation to the position from which they are understood. The understanding of information as (true) information demands a pedagogic authority and presupposes legitimate emitters, legitimate receivers, a legitimate situation and a legitimate language. The understanding of information as (true) information needs a legitimate emitter, who recognises the implicit laws of the system and who is co-opted. It needs addresses recognised by the emitter as worthy of receiving (Bourdieu, 1995). The COVID-19 pandemic can be regarded as a pertinent and thereby a legitimate situation, where information is recognised as important for, in principle, the whole world. Despite a lack of consensus on the pandemic definition, the WHO is mandated to define when an epidemic is to be declared a pandemic, including the need for action on a national or, if needed, global scale in the form of e.g. mass-vaccination campaigns (Holmberg, 2020). This language of importance is even more effective when spoken from an eminent position (Bourdieu, 1995), as e.g. the WHO. Among the strategies for manipulating a group, there is the control of spatial structures and institutional signs of importance. A legitimate, dominant language defines and subscribes to the 'right' truth. At the same time, it is one of the functional ways of passing off the false in place of the true. One of the political effects of the dominant language is that 'it is said so well, so it must be true' (Bourdieu, 1995). In general, people also tend to be more impelled, persuaded and acceptant of information that is in line with and confirming pre-existent attitudes and beliefs (Bourdieu, 1996; Pulido et al., 2020). In a crisis, people are more likely to follow an official announcement, or order, than in so-called ordinary social situations (Pulido et al., 2020). Contrarily to information from the WHO, information from journalists is articulated as spanning between lies and enlightenment, showing that reporters do not necessarily gain people's trust. Whilst scientific facts appear to be reliable, political utterances are generally articulated as tendentious and biased towards a particular agenda. This goes in line with a Swedish study, which during the COVID-19 pandemic, in May 2020, showed the public's varied confidence in journalists (18%), national politicians (28%), health authorities (66%) and researchers (82%) (Sifo, 2020). However, the WHO and national health boards are not 'free of interests' and they have been the subject of heated debates, accused of being in collusion with the pharmaceutical industry (Götzsche, 2013; Holmberg, 2020). Furthermore, the WHO (World Health Organization, 2020b), the EU (European Commission, 2020) and national health boards (Nielsen et al., 2020; National Health Institutes (NHI), 2020; Danish Health Authorities, 2020) have the power and social and economic capital (Bourdieu, 1996) to spread information that builds on a dominant medical logic in social media as true information and to warn about information that they consider as mis- or disinformation. Today's high mobility of information, e.g. through social media, makes issues of reliability, trustworthiness, and reputation all the more important in terms of maintenance of public awareness and the support of prevention and control measures (Dry, 2008; World Health Organization. World Health Report, 2007). Navigating the information landscape on COVID-19 is thus fraught with possibilities, e.g. to find relevant information assessed as true and reliable, and pitfalls, e.g. in form of mis- and disinformation, including all from doomsday prophecies to conspiracy theories, opinions, and simplistic and polarised debates, as articulated in the current findings, lacking nuance and evidence. In the current findings, no articulations however questioned the understanding of the natural (true) information, namely that the COVID-19 pandemic exists. However, the assessment of whether information on COVID-19 is non-natural (true) information, misinformation or disinformation depends on those who assess it and the position from where they assess it. The understanding of (true) information, misinformation and disinformation calls for a

relational understanding of information specifically, and of the social world generally, as Bourdieu (Bourdieu, 1995) argues.

Further, the findings show that there was an articulated trust in healthcare experts, whether from healthcare professionals or non-healthcare professionals. This also goes in line with the above-mentioned Swedish study, which shows that the public's confidence in healthcare professionals is high (Sifo, 2020). This trust concerns both the healthcare experts' information and their professional actions and can, inspired by Bourdieu's (Bourdieu, 1995) vocabulary, be regarded as a virtue of necessity. People have to make the best of a difficult situation when they have no alternatives, since they have no opportunities to change the current COVID-19 pandemic. They must accept the situation. Healthcare professionals and their efforts will emerge as a way for the situation to change. On the one hand, healthcare professionals treat and care for the COVID-19-infected people, which is a hope of survival despite disease. On the other hand, healthcare professionals are researching and developing new treatments, which can be understood as hope for a life without COVID-19. The same patterns are seen in the prevention and treatment of antibiotic resistance, where antimicrobial resistance in bacterial infections is a growing threat to humanity and a challenge to healthcare systems worldwide (Andersson et al., 2019). Apparently, many studies show that healthcare professionals have a major role in the spread of multi-resistant bacteria to hospitalised people as they carry multi-resistant bacteria (Haque et al., 2018; Luque et al., 2019). The same pattern is seen with COVID-19, where healthcare professionals are among the occupational groups with most cases of work-related COVID-19 infections (Lan et al., 2020). Thereby, healthcare professionals run a high risk of infecting patients and others in their environment during e.g. the time of incubation and in mild, non-symptomatic outbreaks of disease.

Social media were articulated as an arena for all kinds of information, for individual and professional uses, where the shared information could be interpreted as (true) information, mis- or disinformation, depending on the commentator's perspective. The findings show that social media could be used to defend the commentator's own point of view, whether in line with the dominant medico-political understanding of COVID-19 or not, and also for attempts at influencing others in changing their perspective and understanding of what true knowledge is. In that sense, social media as an information channel can contribute to reinforce or overthrow the dominant discourse and what is to be seen as (true) information, misinformation and disinformation. Taken to its extreme, social media is used to defend the truth that the individual believes in and to allow others to support it, accept it, ignore it and/or exclude it. In that way, the use of social media platforms functions as an extended arm for creating and consolidating relationships and social groups, based on similar preferences and understandings of life in general (Bourdieu, 1995), and of COVID-19 specifically. Thereby, social media users have both an including and excluding function in defining (true) information, misinformation and disinformation from the point of view where the world is lived and understood. This challenges e.g. the medico-political understanding of fake news, and thus disinformation, and Casero-Ripollés' (Casero-Ripollés, 2020) understanding of fake news as undermining the media's credibility and people's trust in institutions. If the assessment of information as (true) information, mis- or disinformation is predominantly dependent on the individuals themselves and their beliefs, influences from authoritative organisations and the individual's social circle can culturally affect this understanding of e.g. COVID-19 information, further speaking for a relational view on the understanding of information as either (true) information, misinformation or disinformation (Bourdieu, 1995). It seems important to understand how people are affected by and influence social media in relation to the construction of true information related to COVID-19 from their speech position in society. The power of social media use during crises has been observed previously, for instance during the so-called 'Arab Spring'. In that context, just like the current COVID-19 pandemic, the importance of contextualising social media uses in relation to dominant

political discourses in society was also highlighted (Wolfsfeld, Segev, & Sheaffer, 2013).

In order to share information about COVID-19 and how to handle the situation, as seen in the current findings, healthcare professionals put e.g. closed Facebook groups to use to rapidly share what they consider useful and trustworthy information. Smith and Fay Cortez (Smith & Fay Cortez, 2020) also show this. Mulrennan and Colt (Mulrennan & Colt, 2020) highlight healthcare professionals' and scientists' ability to pave the way for the utilisation of new communication and collaboration means in light of COVID-19, especially thanks to social media. Several examples of social media uses contribute to the rapid dissemination of the dominant medico-political knowledge and by extension to useful practices for handling COVID-19, thereby also unburdening healthcare practitioners by providing them with the latest medico-political knowledge to manage COVID-19 (Mulrennan & Colt, 2020). In that way, social media function as a channel to consolidate the medico-political understanding of (true) information and (true) knowledge as a counterpart to other voices' use of the same social media to contradict this medico-political 'truth' and to elicit other understandings of COVID-19. Such understandings are understood from the medico-political position as fake news (Scott, 2020).

Finally, the methods of the study are discussed in short. The survey's comments were handled as a unified narrative of spontaneous articulations on information about COVID-19 in general and specifically in social media. This means that the findings do not point to any individuals per se or their specific situation. They only show different patterns in articulations on COVID-19 related information, regardless of 'who' and 'how many'. Furthermore, the findings only show what and how individuals spontaneously *articulate* in regards to their thoughts and practices; they do not show how the individuals handle information related to COVID-19 in real life. Bearing in mind the characteristics of the sample in terms of gender, education level and country of residence, the current findings may not show all possible articulations on information about COVID 19. However, the shown articulations exist and add to the understanding of the complexity of the construction of true information. Nonetheless, the current qualitative study does not in any way aim at generalisability, but focuses the exploration of different patterns of articulations on COVID-19 related information, generally and in social media specifically. The researchers analysed data separately then co-jointly, discussed their findings and reached consensus, strengthening the findings' reliability. Quotes illustrate the analysis and interpretation of the empirical material, enhancing the process' transparency.

5. Conclusion

This article aimed to explore different articulations of people's understanding, handling and evaluation of (true) information, misinformation and disinformation in general, and specifically linked to social media, related to the COVID-19 pandemic, to illuminate the complexity of the construction of true information. The findings showed that the understanding of information as (true) information, mis- or disinformation was dependent on several aspects, including the individuals' own point of view and influences from their social network. It was a matter of speech position, which problematised the question of the "right" truth and whose the right was to own it. The findings showed that there was no unambiguous understanding of what was the "right" truth, as such an understanding was oftentimes socially constructed. The findings showed a dominant medico-political discourse about COVID-19, represented by WHO, the national health boards, scientists, and healthcare professionals. This discourse was considered as both (true) information, misinformation and disinformation, conditional upon a blurred basis for the current information and COVID-19 strategies. Journalists succeeded in disseminating factual information regarding COVID-19 in line with and as an extension of the dominant medico-political discourse. However, the findings also showed how this fact mediation reached a saturation point in the recipients and how journalists were articulated as responsible for the COVID-19 information overload. In addition,

journalists, on a par with the WHO, national health boards, governments and politicians, were seen as responsible for the progress and handling of COVID-19 due to poor journalistic research. The findings showed that also the media spread (true) information, misinformation and disinformation, depending on the reader position. Further, the study showed articulations about faith and confidence in healthcare professionals, both from healthcare professionals and others. However, healthcare professionals could not be holders of true knowledge, because at the given time, it was impossible to know what (true) knowledge was. Social media were articulated as an arena for all kinds of information, where the shared information could be interpreted as (true) information, mis- or disinformation, depending on the commentator's perspective. On the one hand, social media came through as a mouthpiece for the dominant medico-political discourse on COVID-19, where information in line with that understanding was presented, but also as a place of resistance, where alternative views could be shared, whether seen as true or not by the one consuming the information. A high awareness about the need and value of scepticism and source criticism was indicated, regardless of source, not the least due to the current knowledge gap regarding COVID-19. However, for the same reason, it was difficult to be critical. The current study explored articulations of (true) information, misinformation and disinformation and calls for further research focusing on how individuals act in real life in relation to these articulations. In addition, further research on people's uses of social media and their apprehension of information from such platforms during crises is called for. This to understand how such processes can affect individuals and be affected by them, and how this in turn may influence the development of and handling crises such as the COVID-19 pandemic and related processes.

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- The study was carried out in accordance with ethical research principles as stated in the Declaration of Helsinki (World Medical Association, 2013).
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CRedit authorship contribution statement

Stinne Glasdam: Conceptualization, Methodology, Formal analysis, Investigation, Writing - original draft, Writing - review & editing, Project administration. **Sigrd Stjernswård:** Conceptualization, Methodology, Formal analysis, Investigation, Writing - original draft, Writing - review & editing, Project administration.

Declaration of conflict of interest

There are no conflict of interest.

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