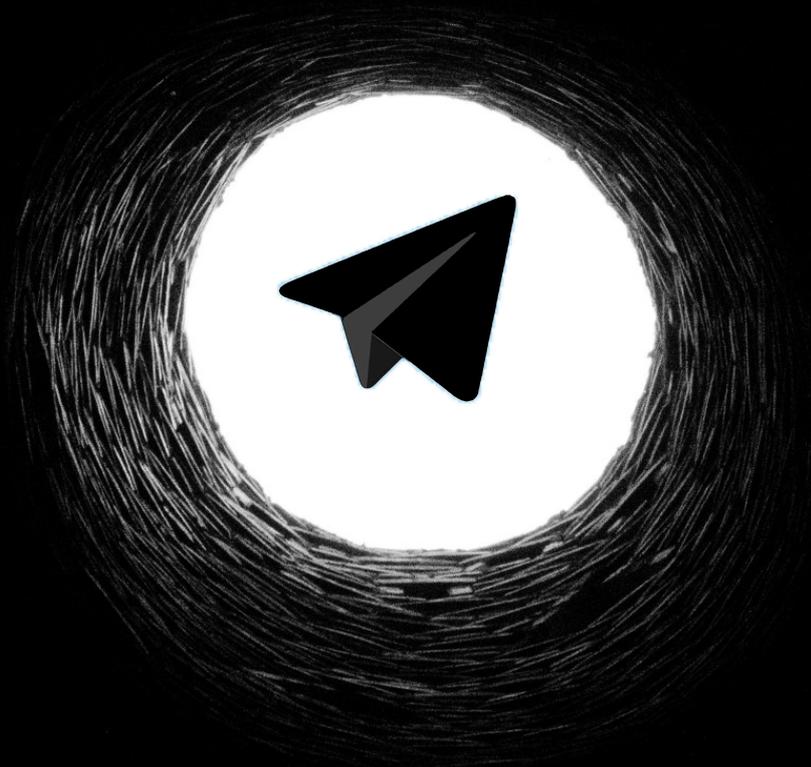


An alternative rabbit hole?

An analysis of the construction of echo chambers within coronavirus activism groups on Telegram.



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Abstract

In 2020 the whole world changed radically over one year due to the coronavirus. This caused misinformation and conspiracy theories to spread, which mainstream social media platforms attempted to reduce by censoring certain information, profiles or groups. This was mainly due to the fear of the creation of so-called echo chambers. The activists started to migrate to the alternative social medium Telegram. Previous research has shown that alternative news and social media play a considerable role in the construction of such echo chambers on mainstream social media. This research has therefore attempted to answer the following question: *to what extent and how do alternative news and social media contribute to the construction of echo chambers within the hybrid media ecology of coronavirus activism groups on Telegram?* With the use of distant reading and close reading, this research analyzed five coronavirus activism groups on Telegram. The analysis showed that alternative social media and alternative news media play a different role in the construction of echo chambers. Alternative social media tended to contribute more within the large environment as it caused a space where only certain beliefs and ideas are shared and where discussion about topics was out of the ordinary. On the contrary, alternative news media caused many different platforms to be shared, causing the group members to be exposed to many different opinions and views.

Keywords: echo chambers, alternative media, audience fragmentation, Telegram

1. Introduction

In 2020 the whole world changed radically over just one year. The coronavirus outbreak caused worldwide lockdowns, which were followed by anxiety and misinformation. Governments had massive decisions to make concerning the lockdowns and vaccines. Groups of citizens strongly disagreed with the measures taken, causing activism. NBC News pointed out that these social movements primarily took place online, as most citizens were permitted to stay home (Rosanblatt, 2020). However, often these online gatherings moved to offline protests. On the 23rd of January 2021, the Dutch government implemented a curfew that forced citizens to stay inside between 9:00 pm and 4:30 am. Subsequently, Dutch coronavirus activists disagreeing with the measures taken started to find each other online. Eventually, the curfew caused riots across the country.

These online communities started on mainstream social media, but governments quickly intervened. According to the Dutch news platform AD, the government of the United Kingdom requested Twitter, YouTube, Whatsapp, and Facebook to actively reduce the distribution of online conspiracy theories (Nieuwenhuis, 2019). YouTube decided to delete all videos containing misinformation or conspiracy theories regarding the coronavirus. As a response to the censoring, the activists started to move to other alternative platforms. On the 25th of June 2020, the Guardian wrote about the migration of conspiracy groups on Facebook to other alternative platforms (Wong, 2020). This happened because Facebook also decided to delete certain pages, groups and profiles that were related to conspiracy theory movements. In November of 2020, it became public that an activist group called "Dutch Survivors" had shared a list of addresses of Dutch celebrities on Telegram (NU.nl, 2020). Another corona activist group, "*Viruswaarheid*" (previously known as "*Viruswaanzin*"), began an anti-censorship campaign by starting and sharing a Telegram channel. Just recently in 2020, Richard Rogers (2020, p. 214) published an article that discusses the effectiveness of deplatforming and replatforming on Telegram, he maps out the alternative social media ecology and touches upon the research opportunities provided by Telegram. Rogers (2020) also noted that deplatformed individuals started to move to Telegram.

Telegram is a platform created by a Russian entrepreneur Pavel Durov. Telegram can be compared to WhatsApp, as it is an open-source platform meant for messaging individually and in groups. The ideological aim of the applications is the main difference. Telegram aims to protect the user's privacy and presents itself as a non-mainstream platform (Akbari & Gabdulhakov, 2019). Telegram is a free platform without any ads. The platform enables the possibility to create groups with up to 200.000 members, in comparison to WhatsApp's groups a maximum of 256 members. Telegram also provides channels to broadcast messages to users. Although the

platform aims to protect privacy, it is only possible to sign up using a phone number. However, users can find each other by searching for their username, which can be anything and does not require a first and last name, as is needed on Facebook. This will also not reveal the users' phone numbers. Rogers (2020) also makes multiple statements regarding the use of Telegram for research. Telegram is an accessible platform for scholars as the data is freely available and easy to download. It, therefore, makes it easy to analyze how other platforms are discussed and engaged with inside the groups of Telegram. He also points out that by only examining Telegram researchers do not limit themselves to a single platform analysis as many other platforms are also referenced to.

These activists also strongly rely on alternative news media. According to Meikle (2018, p. 5) activists started to move to alternative news media because dealing with mainstream media "means dealing with their preferences for certain types of narrative." Research showed that major parts of the conspiracy theories on Twitter were fueled through alternative platforms and that mainstream platforms were mostly cited to challenge them (Starbird, 2017). Alternative media (think of *GeenStijl* or *NineForNews*) used to be known for its ability to give voices to people who did not have that possibility before (Gehl, 2015). Nowadays, it is easy and accessible for amateurs to create and distribute alternative platforms. It should be noted that the definition of alternative media is not set in stone, as is the division between mainstream and alternative media. The division between alternative and mainstream media is an ongoing and challenging debate. Many scholars categorize alternative media in different ways. This could be based on the form of a medium, its content or its producer. Additionally, according to Jennifer Rauch (2016, p. 4), the boundaries have started to blur, mentioning mainstream and alternative media should not be seen as "mutually exclusive categories". Kim and Hamilton (2006) emphasize such hybrid practices through the example of a website that is based on participatory users to highlight news neglected by 'mainstream' media, whilst financing the website through advertising. In addition, the website also contained a lot of professional content. This example portrays the difficulty of the debate, concerning the use of the labels 'alternative' and 'mainstream', as these are sometimes both present in a converged environment. Later in this thesis, this division will be touched upon again. In Chapter 2, the diverse definitions of alternative media will be discussed in detail. The converged environment and the blurring of boundaries between alternative and mainstream media will not be discussed in this research, due to the extensiveness of the debate. For the purpose of this research, it is most important to critically engage with and understand the conceptualization of alternative media as whole.

Nonetheless, alternative media contribute to nowadays high-choice media environment. The growing number of platforms distributing information offers the readers the opportunity to opt-out whenever they disagree with a platform or message, or if they are simply not interested

(Van Aelst et al., 2017). This process of selectively engaging with certain media causes a development referred to as audience fragmentation. Audience fragmentation refers to the distribution of audiences over multiple information channels (Webster, 2005). This means that alternative media contribute to a high-choice media environment in which people tend to selectively engage with media content that consequently causes audience fragmentation. Audience fragmentation does not necessarily align with negative consequences, as it also creates the ability to consume diverse content. However, individuals also tend to binge platforms that suits their personal beliefs (Webster, 2005). Whenever an individual ends up in an environment where certain beliefs and narratives are repeatedly shared this may have negative consequences. Such an environment is referred to as an echo chamber. Previous research has shown that individuals have the chance to end up in an online echo chamber, where users cherry-pick the content that suits their beliefs (Wieringa et al., 2018). Echo chambers refer to the consistent echo of similar ideologies, without engaging with any contradicting viewpoints. These concepts, alternative media and echo chambers, will be elaborated on in detail in Chapter 2 of this research.

This representation of the contemporary online developments naturally leads to the research question of this thesis: *to what extent and how do alternative news and social media contribute to the construction of echo chambers within the hybrid media ecology of coronavirus activism groups on Telegram?* As the mainstream platforms tend to push certain users to other alternative platforms, it is of societal relevance to investigate the construction of the echo chambers within the alternative environments on Telegram. Furthermore, coronavirus activists have a great impact on the contemporary crisis. This research will focus on the shared alternative news and social media platforms within five groups on Telegram. Telegram only functions as a relevant alternative social media environment on which all shared links will be analyzed. An analysis of the affordances of the platform itself will not be included in the research. The academic relevance is that this research focuses on echo chamber construction within an alternative social media environment. Previous research had a strong focus on the construction of echo chambers within mainstream (social) media environments (Haw, 2020; Jamieson and Cappella, 2008; Dubois and Blank, 2018. Wieringa et al., 2018). In 2018, Wieringa et al. published their article "Political topic-communities and their framing practices in the Dutch Twittersphere." This article offers groundwork that has motivated this thesis. Wieringa et al. (2018) focused on the mentioning of alternative platforms, but from the point of view of the mainstream social media platform Twitter. This has led to the academic gap of how such echo chambers are constructed within an alternative environment, such as Telegram. It also opens up the question about the role of alternative media in general within constructed echo chambers. Wieringa et al. (2018) mentioned alternative platforms to play a big role within mainstream media but do not combine

these insights with behavior on an alternative social medium. To adequately answer the research question, the following sub questions will be answered:

1. *How are the characteristics of audience fragmentation leading to echo chambers presented within the groups, with regard to the sharing of alternative media?*
2. *What role does the sharing behavior of the group members play in the construction of echo chambers?*
3. *To what extent and how do alternative social media and alternative news media differ in their contribution to the construction of echo chambers?*

The definition of a hybrid media ecology will be explained in Chapter 2, followed by an in-depth overview of the conceptualizations of alternative media. This simultaneously touches upon previous research and will therefore clearly portray the academic gap. This chapter will also zoom in on the conceptualization of audience fragmentation and subsequent echo chambers. This is followed by an introduction of Stuart Hall's (1973) encoding and decoding model. As mentioned before, the research conducted by Wieringa et al. (2018) offers the groundwork for this research. They focused on both the mentioning of certain platforms, but also analyzed the framing practices. The encoding and decoding model will provide a theoretical and systematic model that can be applied when analyzing the framing practices. The analysis of the framing practices will function as a method to understand the role of the sharing behavior. Chapter 3 explains the used methods for this research. Similar to Wieringa et al. (2018), this research implements a mixed-method approach. Both close and distant reading must be applied to develop a sufficient conclusion. First, the distant reading methods will be explained, followed by a frequency overview of the mentioned platforms and a network analysis. The network analysis represents the extent to which the different groups mention the same alternative platforms. This method will be used to understand how certain characteristics of audience fragmentation are present in the groups. Thereafter, the close reading method will be explained. This method is applied to understand the sharing behavior of the group members. Chapter 4 presents the results of both the distant and close reading. The first section of the chapter, presenting the distant reading results, answers sub question one. During this process, the mentioned platforms will be divided into two categories: alternative and mainstream. Next, the framing practices will be presented according to the encoding and decoding model. All these results will then be interpreted and discussed in Chapter 5. The division between alternative and mainstream made during the analysis will be interpreted and combined with the conceptualizations discussed in Chapter 2. Following this, all the other results will be discussed in combination with the definitions of echo chambers to answer the research question. The last chapter will state the conclusion.

2. From alternative media to echo chambers

As mentioned before, online communities play a big role in both online and offline activism (Harlow & Harp, 2012; Samory & Mitra, 2018). Previous research has turned to theories of alternative media, audience fragmentation, and subsequent echo chambers to grasp the understanding of such online activism. In the following chapter, these phenomena will be elaborated on and the academic debates, inconsistencies, and gaps will be discussed. These phenomena shall function as a critical lens to understand how a high-choice media environment can contribute to the creation of echo chambers. Alternative media and the consequences of audience fragmentation fall under the umbrella term “hybrid media ecology”. This concept refers to the growing hybridity of the media environment, where many resources come together and result in fragmentation (Haw, 2020). Thereafter, a model that provides the opportunity to understand how alternative media are framed within the Telegram groups will be introduced. This is referred to as the encoding and decoding model by Stuart Hall (1973), which was originally introduced for television audience analyses and is now adapted by contemporary media scholars.

2.1. A complex media ecology

A hybrid media ecology exists of many media outlets and a fragmented audience. The following section will explain the role of alternative media and will go in-depth on the consequences that audience fragmentation can entail in such a hybrid media ecology. Henry Jenkins and Mark Deuze (2008) use Yochai Benkler’s (2006) concept of a ‘hybrid media ecology’ to describe the growing interaction between amateur, nonprofit, commercial, governmental and activist media resources. Later, Emilioano Treré (2018) studied an online movement that also led to “an understanding of social movements as complex and hybrid media ecologies”. A hybrid media ecology reflects the increasing ways of broadcasting and sharing political thoughts by both professionals and amateurs (Treré, 2018). Wieringa et al. (2018) noted that within this hybrid media ecology right-wing users tend to refer to alternative media more often than mainstream media. This is not only common amongst right-wing users but tends to happen in cases where people search for their information without having to rely on professional journalists (Starbird, 2017).

2.1.1. *A wide range of alternative media conceptualizations*

Alternative media echo the aforementioned differences in media resources and the high-choice media ecology (Haw, 2020; Jenkins & Deuze, 2008). The concept of alternative media is a broad one that has been defined many times in the past. It has frequently been referred to as participatory progressive left-wing media (Downing, 2001), which clashes with the abovementioned conclusions by Wieringa et al. (2018) that mostly conservative right-wing use

alternative media. Alternative media can be divided into two components: alternative news media and alternative social media. Both components will be included in this research, of which alternative social media will be explained first, followed by an in-depth analysis of the academic, sometimes contradictory, debate around alternative news media.

The hybridity between corporate and alternative media reflects the combination of activism on corporate platforms such as Facebook, Twitter or YouTube and the growing use of alternative social media (Treré, 2018; Rogers, 2020). Gehl (2018) argued that social media should be considered corporate social media (CSM) as they were “absorbed by informational capitalism” (Gehl, 2015). Gehl (2015, p. 5) then attempts to theorize alternative social media (ASM) by assigning them three key features: “their anti-advertising stances, their pedagogies of network typology and code, and their particular deployment of surveillance practices”. One of these alternative social media platforms is Telegram. Rogers (2020, p. 216) mentions Telegram to be “another of those so-called darker corners of the Internet”, to which users migrate to avoid mainstream platforms. The platform offers certain features that protect the user’s privacy, which makes it attractive for extreme speech and activism (Rogers, 2020). The attractiveness of Telegram is the encrypted communication, the ability to create both groups, enabling both interactions as broadcasting, and for users looking for – what Rogers refers to as – “social privacy” (Rogers, 2020, p. 216).

The academic debate around the conceptualization of alternative social media is relatively limited. Later in this thesis, the conceptualization of alternative social media will be redefined. On the contrary, the academic debate concerning alternative news media is considerably large. Gehl (2015) relates alternative media to radical democracy. He summarizes alternative media as media that is “organized to flatten the producer/consumer hierarchy and thus challenge “media power” in whatever form it takes” (Gehl, 2015, p. 2). Chris Atton (2002) tries to broaden such a perspective by which he offers the perspective of studying alternative media as more than just radical media by also including zines (self-published work without a professional structure) and personal websites. According to Atton (2002), alternative media cannot just be defined by its content, but the creation, production, and distribution should also be taken into consideration. It is often written by informally skilled journalists, which is produced using non-standard methods. Important to note that the book was published in 2002, since then social media and the multitude of online platforms have increased greatly. This has made it easier for amateurs to join the field using the same methods as professionals. Non-standard methods are now more challenging to differentiate from standard methods.

This is an aspect Sandoval and Fuchs (2010) had noticed in their attempt to define alternative media. In the high-choice media environment, an alternative medium is often pushed towards the use of a professional organization structure to equally compete with mainstream

media. Alternative media represent more than merely media that work with a different distribution and marketing method (Fuchs, 2010). Therefore, Fuchs (2010) argues to conceptualize alternative media as critical media. He mentions alternative media to be “the communicative dimension of the counter-public sphere” (Fuchs, 2010, p. 184). He adds that these counter-publics do not merely exist of progressive left-wing, but that the conservative right-wing also play a significant role. Figure 1 introduces a scheme, in which Sandoval and Fuchs (2010, p. 147) present the necessary and less necessary qualities of alternative media. In this scheme, they express their vision of alternative media being outside of capitalism. The required dimensions concern the content being critical and the content being created by critical producers, subsequently, alternative media should be critical of ideological content. Ideological content is, however, fairly open for interpretation and it is unlikely that a platform does not present any form of an ideology.

		Capitalist mass media	Ideal alternative media	
Media Structure	Economic form of media products	Media product as commodity	Non-commercial media product	
	Content and form of media products	<i>Ideological content and standardized form</i>	CRITICAL CONTENT AND/OR COMPLEX FORM	
Media Actors	Consumers	Many consumers	Critical consumers	Critical prosumers
	Producers	Few producers	CRITICAL PRODUCERS	
<i>This dimension is necessarily not a quality of an alternative medium</i>				
<i>This dimension is a potential, but not a necessary quality of an alternative medium</i>				
THIS DIMENSION IS A NECESSARY QUALITY OF AN ALTERNATIVE MEDIUM				

Figure 1. Characteristics of alternative media

Note. From Sandoval, M., & Fuchs, C. (2010). Towards a critical theory of alternative media.

Telematics and Informatics, 27(2), p. 147.

Downing (2001) also defines alternative media as ‘radical media’ by applying it to social movements. His idea of radical media has similarities with Fuchs’ (2010) definition of ‘critical media’, as Fuchs refers to counter-public criticizing hegemonic structures. Although his perception of alternative media is a suitable baseline for this research, he tends to focus on the left of the political spectrum and therefore neglects all other alternative media posing different political viewpoints (Couldry & Curran, 2003). Couldry and Curran (2003) also analyze alternative media as radical platforms and they simultaneously connect alternative media to

social conflicts. However, they tend to focus on what they call “the power paradox”, which refers to the two approaches to media power. The first refers to the idea that other powerful forces use the media to increase their power and communicate their arguments. The second refers to the power of the medium itself. Couldry and Curran (2003, p. 7) therefore define alternative media as “media production that challenges, at least implicitly, actual concentrations of media power, whatever form those concentrations may take in different locations”.

As presented in the previous section, alternative media have a wide range of interpretations, all focusing on slightly different aspects. Therefore, the undermentioned Table 1 has been created to fully understand the scope of these definitions. The table lists all possible characteristics of alternative media. The importance of the characteristics, according to the scholars mentioned above, is shown from left (little importance) to right (greater importance). As presented in Table 1, alternative media can either be defined by its distribution and creation practices or its content. Although the opinions of what should be considered as appropriate content for alternative media might differ, they all reflect the idea of it being critical of hegemonic structures. As these definitions have such wide variations, it is of academic interest to apply the concept to an activist group from which the political color is not as obvious. As shown in Table 1, for a medium to be alternative it must contain counter-hegemonic content. The political orientation will not be considered a necessary factor as the opinions on this differ widely and the political vision of corona activists is not as clear-cut. Therefore, this research will refer to alternative media, including both alternative news and alternative social media, as: *media that contain counter-hegemonic content and promote social privacy, with the possible use of alternative creation and distribution practices owned by a critical producer.*

Table 1. Criteria of alternative media						
Alternative media is defined by its:	Left-wing orientation	Right-wing orientation	Creation & distribution	Critical producer	Critique on media power	Counter-hegemonic content
Gehl	Yes	No	Yes	Yes	Yes	Yes
Atton	No	No	Yes	No	Yes	Yes/No
Sandavol and Fuchs	Yes	Yes	No	Yes	No	Yes
Downing	Yes	No	No	Yes	No	Yes
Couldry and Curran	No	No	Yes	Yes	Yes	Yes

2.1.2. *How audience fragmentation turns into echo chambers*

The increasing number of platforms due to alternative media leads to a high-choice media in which the audience is distributed over many news outlets. This occurrence is often associated with audience fragmentation and echo chambers (Steppat et al., 2020). The following section will clarify this process. Audience fragmentation occurs when the mass audience is distributed over many differing news outlets (Webster, 2005). This consequence has been noted before when television channels started to increase largely. Where the audience used to be distributed over three to four channels, the mass audience became widely spread, leading to a smaller audience per channel. Webster (2005) pointed out the benefits, being the ability to have diverse content, and the fallacies, which refer to the user's ability to simply *binge* their favorites instead of consuming little of each network. This selective exposure does not come without any social implications. In his article Webster (2005, p. 379) points out that "modest levels of polarization lie beneath the surface of the fragmented audience". Webster (2005, p. 379) refers to these consequences as "dystopian portrayals." Whilst this article only focused on television audience fragmentation, it can easily be applied to the contemporary high-choice media environment, in which the "channels" have increased even more. In this new media environment, social media platforms, such as Telegram, provide the opportunity to distribute these platforms, in which the growing information outlets are effortlessly spread.

This consequence is therefore a frequently recurring topic in today's academic debates, in which scholars try to understand this process of 'selective exposure' possibly turning into the so-called 'echo chambers' (Haw, 2020; Jamieson and Cappella, 2008; Dubois and Blank, 2018). Kathleen Hall Jamieson and Joseph N. Cappella (2008) published a book on the existence of an echo chamber in the conservative media establishment. According to them, selective exposure has become inevitable due to the increasing number of media. They define echo chambers as an "enclosed media space that has the potential to both magnify the messages delivered within it and insulate them from rebuttal" (Jamieson and Capella, 2008, p 74). Echo chambers are not necessarily just harmful, they also come with positive effects as echo chambers increase political engagement and ideological coherence. In their study, they focused on the content of the conservative news outlets, by focusing on how these news outlets referred to "liberals" and "liberal media". These outlets tended to refer to the mainstream media as biased media with double standards and frequently attacked liberalism. These tactics caused distrust of mainstream media and polarization. Although Jamieson and Cappella (2008) give interesting insights on how an echo chamber could work, their perception of an echo chamber is somewhat ungeneralizable as they focused on three television channels. They examined the mechanisms of a created echo chamber within the channel, disregarding the influence of other channels. This works rather differently for echo chambers on social media as they contain many different sources.

To understand such an echo chamber, we turn to Ashleigh Haw (2020). Haw (2020) focuses on digital forms of political communication through social media. Haw (2020) defines an echo chamber as fragmented audiences attempting to avoid worldviews contradicting their own. Haw (2020) already points out the conflicting findings concerning the existence of echo chambers. Haw (2020, p. 2) believes that “news consumption habits are driven by convenience or circumstance.” An interesting finding of Haw’s (2020) research is that individuals in an echo chamber tend to engage with media they mistrust. Haw (2020, p. 12) concludes that echo chambers do exist but need to be more nuanced. Individuals in an echo chamber have a “highly diverse media diet.” The participants of the study were mostly left-wing oriented, which might have affected the outcomes. It is therefore important to understand such practices under users with a different political preference.

Dubois and Blank (2018) also emphasize the conflicting understandings of echo chambers and agree that the concept should have a more nuanced approach. Dubois and Blank (2018, p. 729) define echo chambers as “a situation where only certain ideas, information, and beliefs are shared.” According to them, the conflicting research is caused by the fact that many studies focus on one platform and that the measurement has been insufficient and inconsistent. A possible reason for these insufficient and inconsistent measurements is that “while audiences are fragmented, most individuals continue to rely on at least some general sources of news and political information” (Dubois and Blank, 2018, p. 732). They also refer to the issue that most research on echo chambers has a strong focus on Twitter. Wieringa et al. (2018) found that their sample of Twitter users mostly share content that suits their standpoints and conclude that Twitter users cherry-pick the content that suits their worldview resulting in some form of an echo chamber.

As mentioned for both the academic understanding of alternative media and the existence of echo chambers, the focus has predominantly been on mainstream social media platforms. Rogers (2018) mentions that anti-establishment actors tend to move to Telegram. Therefore, this research will focus on the possible construction of echo chambers due to audience fragmentation in coronavirus activism groups on Telegram. The concept of echo chambers has been referred to in slightly different ways. In this research, echo chambers will be referred to as: *an enclosed media space where the individuals binge certain platforms and where only certain beliefs and ideas are shared that are insulated from rebuttal.*

As noted by Treré (2019), an ecological and hybrid approach opens up the possibility to notice unforeseen outcomes. The concept of hybrid media ecology will function as an umbrella term for high-choice media containing mainstream and alternative media that result in audience fragmentation and possible echo chambers. To understand how these alternative media are framed, the encoding and decoding model will be applied, which will be explained more in detail

in the next section. This research will contribute to the academic debate surrounding the topic as most research has been done on Twitter.

2.2. The encoding and decoding model

As mentioned before, the users tend to engage with media for different reasons. Engaging with a medium does not necessarily suggest that the individual agrees with the medium's ideology. For example, sharing a link in a Telegram group could be done to share the information, to attack the medium or its message, or it could even to have sarcastic reasoning. It could also imply that the individual might mistrust the medium and is therefore engaging with their message. Haw (2020, p. 13) also made a differentiation between news engagement and news exposure, mentioning that the exposure does not necessarily mean that the person "has meaningfully engaged with it." Therefore, to understand the role of alternative media, it is important to understand how the members of the groups frame the messages. Haw (2020) noticed the importance of including an analysis that portrays whether the readers agree or disagree with the message to understand the construction of echo chambers. This section will explain the encoding and decoding model and how this has been applied in previous research.

Wieringa et al. (2018) applied such an analysis in their research. In their analysis, they adapted Ross's (2011) altered version of the encoding and decoding model, which was created by Stuart Hall (1973). To build further upon Wieringa et al's (2018) research, the proposed model by Stuart Hall (1973) will be used as a starting point. Hall (1973) introduced his model as a response to the traditional transmission model by looking at communication as a process. The model aims at understanding how the public reads television messages. The model represents the process of a message that is encoded with meaning, distributed, and subsequently decoded (interpreted) by the receiver. It describes different modes of reading (interpreting), which are divided into three reading positions: dominant-hegemonic, negotiated, and oppositional. These positions refer to the position an individual takes upon the encoded message. Important to note is that Hall (1973) assumes that all television messages are encoded with a dominant ideology, which can be translated to the promotion of governmental beliefs. His proposed decoding positions are based on this assumption. However, contemporary media exist of many different encoding positions, particularly when including alternative media.

As a response to this fundamental issue when applying the model to present-day media, Sven Ross (2011) adjusted the structure of the model to increase its usability. Ross (2011) divides the model into what he calls the model proper and the typology. The model proper refers to the model that represents the process of an encoded and subsequently decoded message, whereas the typology refers to the "three hypothetical decoding positions: dominant-hegemonic, negotiated and oppositional" (Ross, 2011, p. 2). Ross (2011, p. 5) notices that the decoding

positions can be interpreted in two ways by stating: “the three positions are described both in terms of ideological positions and in relation to the encoded meaning of the text (which I will call ‘text-relative’).” Due to the issue mentioned above, Ross (2011) proposes two alternative typologies. By splitting up the typology into two variations, the before-mentioned text-relative and ideological, it provides the researcher the opportunity to interpret the decoding positions in two different manners. Wieringa et al. (2018) in their turn again altered Ross’ (2011) revisited model. In their analysis of how platforms are framed they analyzed the encoding practices of these tweets, leaving the decoding process out of the analysis. They coded the tweets according to how it was encoded, they referred to this as the “manner of framing”. The encoding strategies were categorized according to the position the tweets had as opposed to the medium they discussed, which Wieringa et al. (2018) refer to as ‘the baseline’. They altered the model by replacing the ‘dominant-hegemonic’ with ‘affirmative’ and added seven categories to the negotiated position. In their analysis, they made distinctions between the position opposed to the medium and the position opposed to the message. This adapted model will be explained more in-depth in the next chapter.

Conclusion

This theoretical framework has attempted to understand the underlying systems of the hybrid media ecology that can result in echo chambers. These echo chambers are created due to audience fragmentation, which in its turn is created by a high-choice media environment. To fully understand these underlying practices, the encoding and decoding model has been conceptualized. As realized from this chapter, this research is of academic relevance due to the lack of understanding of such a hybrid media ecology within an alternative social media platform – as the focus has predominantly been on mainstream social media platforms – by users with an unclear position on the political spectrum.

3. Understanding the corpus

As mentioned in the introduction, methods of both close and distant reading will be used to answer the research question: *to what extent and how do alternative news and social media contribute to the construction of echo chambers within the hybrid media ecology of coronavirus activism groups on Telegram?* Distant reading will be applied to find patterns in the shared alternative media platforms. This form of distant reading will filter and count the frequency within the telegram groups within a given timeframe. This represents the extent to which alternative media play a role. Then, it will be clarified how a network analysis will visualize the extent to which the different groups share the same alternative news articles. As will be discussed more in-depth later, the corpus will consist of a large number of messages downloaded from five Telegram groups. Thereafter, the close reading will be explained, which will present an understanding of the framing practices. The following chapter will explain the implementation of these methods into the research.

3.1. Distant reading

First, distant reading will be used to explore the corpus and it will also answer sub question three: *how are the characteristics of audience fragmentation leading to echo chambers presented within the groups, with regard to the sharing of alternative media?* To answer this question an overall overview of all platforms will be given, as will the similarities between the groups be evaluated. In 2000, Franco Moretti coined the term distant reading in his article 'Conjectures on world literature', wherein he refers to the analysis of secondary literature (Moretti, 2000). Nowadays, this concept is mostly mentioned in the digital humanities, as distant reading is mostly used to do computerized analyses of texts (Jänicke et al., 2015). By distant reading the dataset it is possible to filter all the shared links. As mentioned by Rogers (2020), Telegram is a useful platform for research as the channel and group history is easy to download and it is therefore easy to gather a large dataset. When applying digital methods, it is important also to consider the epistemic implications of the tools (Van Es et al., 2018).

The corpus will consist of five groups engaged with coronavirus activism: *Corona chat*, *Mondkapjes verzet*, *Info Dutch Survivors Page*, *DS de grootste familie van Nederland* and *Samen 1 voor Nederland*. These groups have been selected because of the number of members in comparison to other similar groups and due to the groups having a strong focus on coronavirus activism. On January the 16th 2021 the number of members of the groups varied between 555 and 1064. The corpus will contain all messages sent between the 14th of December 2020 up until the 6th of February 2021. On the 14th of December 2020, the Dutch prime minister Mark Rutte announced a second official lockdown and on the 23rd of January 2021, the government

announced the curfew. Since the start of the lockdown, the curfew had been discussed during press conferences multiple times. The implementation of the curfew led to numerous protests. It is therefore important to include a timeframe leading up to the actual implementation of the curfew. Additionally, the two weeks following the announcement of the curfew will also be incorporated. It is important to note that the development of online to offline activism will only function as a noteworthy timeframe, the development itself will not be examined in this research.

First, all the hyperlinks will be extracted from the downloaded group conversations. As also highlighted by Rogers (2020), Telegram is a useful platform for research, as it is possible to easily download conversations within a specific timeframe. This part of the analysis will be carried out with AntConc. The downloaded HTML documents can easily be opened in Antconc. This tool is created as a user-friendly method to analyze texts with a computer. AntConc is originally created to function as a tool for corpus linguistics, but it has often been applied to research social phenomena. Although AntConc allows for interesting concordance analyses, it will merely function to filter out all hyperlinks within the documents by searching for “http”. The hyperlinks will be filtered and placed in Excel, in which the data will be sorted and cleaned.

In this process, the platforms will be categorized as “alternative”, “mainstream” or “undefinable”. This categorization will be done with the use of Table 1, shown in Chapter 2, and according to the final definition of alternative media: *media that contain counter-hegemonic content and promotes social privacy, with the possible use of alternative creation and distribution practices owned by a critical producer*. The links will one by one be examined by looking at the layout, the articles presented on the homepage and, if necessary, the policy will be taken into consideration. Whenever one characteristic, as shown in Table 1, is present, the platform is considered as ‘alternative’. All other platforms will be considered as mainstream platforms, unless the platforms do not contain any news or social element (for example, Amazon or Wikipedia) or platforms that have been taken offline. Even though the applied definition of alternative media and Table 1 represents a carefully thought-out combination of many different academic approaches, the categorization is eventually dependent on my perception and might differ slightly from other scholarly interpretations.

The Excel documents containing all the categorized hyperlinks and platforms will subsequently be inserted in Tableau. Tableau is a visualization tool that provides the opportunity to explore the data and understand patterns. A user can enter a dataset that can be visualized in 24 different ways. Important to keep in mind is that a lot of processes, steps, data cleaning, and choices are hidden in the inserted data sources. The interpretation of the data influences knowledge production. For example, all shared images will be disregarded in this research, although they might contain valuable information. It is therefore important to consider the epistemic impact of the tool. It will nonetheless provide an overview of the gathered data. The

results will have three functions: provide an understanding of the prevalence of alternative media, give an overview of the key players and it will give insight into the differences between the groups.

In addition to this, a network analysis will visualize the similarities between the groups. During this step, the hyperlinks taken directly from the conversation will be used, whereas the first steps only focused on the mentioned platform within the link. The network analysis will be performed with the use of Gephi. Gephi is another visualization tool, this time focused on network visualizations. A network analysis consists of nodes that are visually connected by edges. The imported data, therefore, consists of a spreadsheet containing the links between platforms. For example, whenever group A mentions the same alternative hyperlink as group B this is noted in the spreadsheet. Each similarity is individually counted in the dataset. The nodes for the network analysis will consist of the five Telegram groups. A node will grow larger when mentioned more frequently in the dataset. The edges are created when two groups mentioned the same article, the more resemblance between two groups, the larger the edge will be. This network visualization will give insight into the echoing role of alternative news and social media within different groups. The same fallacy as for Tableau needs to be considered, it will portray an easy representation of a large dataset. The tool also has some other fallacies that might have an epistemic impact. For example, it is not possible to undo any choice within the tool and the algorithms making the visualization will always contain certain black boxes. To ensure that a full picture will be presented, many computational steps need to be taken. Combining these steps will make sure that a broad overview is given, without focusing on just part of the high-choice media environment. The network visualization is especially important for the main research question.

3.2. Close reading

This brings us to the close reading that will be performed with the use of the encoding and decoding model. This research will apply Wieringa et al.'s (2018) approach by looking at the encoding practices when group members share a hyperlink, to define how the platform or its content is framed (see Figure 2). Analyzing the framing practices is needed to understand why the users share the message. As mentioned before, the motivation to share a message can differ and needs this to be considered to formulate an accurate conclusion. The close reading will answer sub question two: *what role does the sharing behavior of the group members play in the construction of echo chambers?*

Due to the qualitative nature of this part of the analysis, just a small sample can be analyzed. For this, the 25 most mentioned platforms within the edges table will be chosen. The edges table refers to all the similarities between the groups that have been gathered for the network analysis. For each of these 25 platforms, the most mentioned article will be picked, and

combining such methods, it is easy to get a clear overview of the ecology, whilst also understanding the group's motivations. Due to the reflexive process of the research, as it includes an interpretation of the researcher, the close reading cannot be generalized. It is also important to note that while analyzing the encoding practices of the Telegram users, I am simultaneously decoding their framing practices. My interpretation of the messages may therefore influence the outcomes. Nonetheless, this method is re-used from earlier research to compare and expand on their outcomes. The analysis might also raise some ethical concerns because of the downloaded groups and channel information. This will be considered during the whole research. The users will be anonymized and irrelevant information (all messages not containing a reference to alternative media) will be excluded from the dataset.

4. Inside the Telegram groups

This chapter will analyze the corpus to answer two sub questions: *How are the characteristics of audience fragmentation leading to echo chambers presented within the groups, with regard to the sharing of alternative media? What role does the sharing behavior of the group members play in the construction of echo chambers?* The first step of understanding the contribution of alternative media in the hybrid media ecology of coronavirus activists is to understand its occurrence in the groups. The first section will present the research's findings that will provide an insight into the extent to which alternative media are used within the Telegram groups. The second section will analyze how the users of Telegram frame alternative media within the five groups.

4.1. The use of alternative media

This overview develops a bird's-eye view of the situation. First, the most mentioned platforms in general and per group will be evaluated to get a first understanding of the prevalence of alternative media within the groups. The second part will zoom in on the similarities between the groups. Where the first part has a stronger focus on just the frequency of the mentioned platforms, this second part will take a more detailed look at the specific messages. The network visualization will show how and if the groups are connected and what these connections consist of.

4.1.1. The key players

First, all hyperlinks were extracted from the conversations, which were then divided into alternative media messages, containing the full link, and alternative media platforms, in which only the first part of the links (referring to the platform) was kept. In total, 978 different platforms were mentioned in 8197 diverse hyperlinks, with the group *Info Dutch Survivors Page* containing the least number of different platforms (135) and *Samen 1 voor Nederland* containing the highest numbers of different platforms (565). This amount contains every possible hyperlink, including links to webshops like Amazon or government information platforms. Figure 3. shows the top thirty most mentioned platforms. The blue bars correspond to mainstream media, the orange to alternative media, and the grey bars resemble all platforms that cannot be categorized by either mainstream or alternative media. This could be due to the website being offline, being neither English nor Dutch, or because the platform cannot be classified as either news or social media. Figure 3 indicates that 66,5% of the thirty most referred to platforms are mostly mainstream media, where a lot of this consists of mainstream social media, against 27,9% alternative media platforms. The same pattern is found in the thirty most mentioned platforms per group. Four out of the five analyzed groups have either Twitter or Facebook in the first place, with *Info Dutch*

Survivors being the exception. The most mentioned platforms of *Info Dutch Survivors* consist mostly of alternative media.

Whilst this might indicate that alternative media are used less frequently in comparison to mainstream media, it potentially gives a distorted picture, as alternative media can consist of more varied platforms. Therefore, it is important to gain insight into the prevalence of alternative media within all 978 platforms. Out of all mentioned platforms, 36,7% can be classified as mainstream media versus 51,9% being alternative.

30 most mentioned platforms

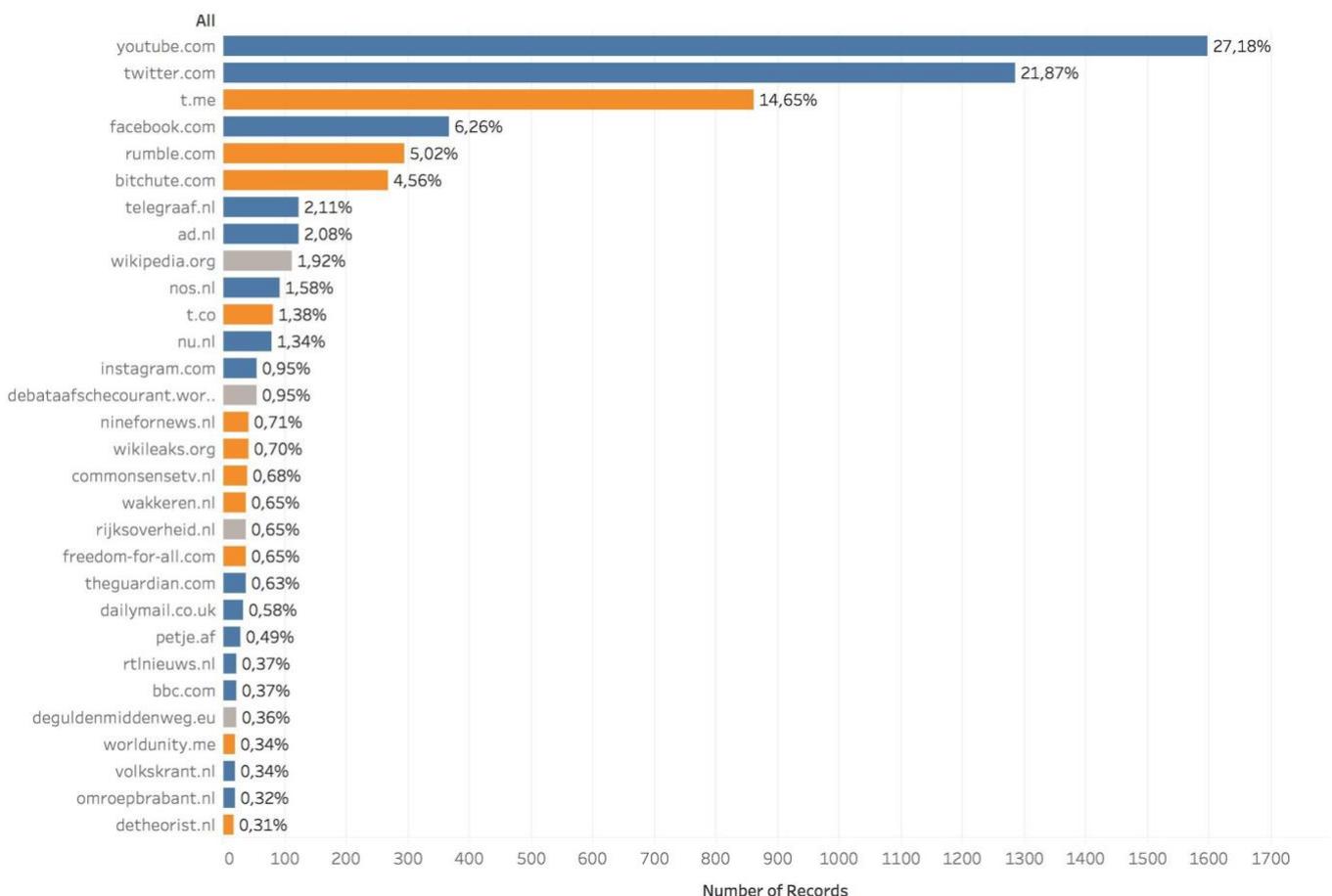


Figure 3. 30 most shared platforms within the Telegram groups.

The remaining platforms could not be categorized. This indicates that alternative media play a significant role when sharing hyperlinks. However, it also indicates that this consists of widely varying platforms, whereas the mentioned mainstream platforms have stronger uniformity in the shared platforms. These results can be seen as a contradiction to Webster's (2005) mentioned fallacies of a high-choice media environment. She mentioned the fallacy to be that users binge their favorite content instead of consuming little of each network. Although her argument refers

to television networks, in which the options were considerably smaller than online, the results do show that the users refer to many different alternative platforms.

4.1.2. *Linking the groups*

Next up, the similarities between the shared links will be analyzed. This will present the extent to which the users of the Telegram groups refer to the same alternative media messages. For this, all the hyperlinks of a group were compared to the other groups and the duplicates were extracted. These duplicates represent the edges within the network analysis created with the use of Gephi. Thereafter, these were again categorized between alternative and mainstream media, by selecting the hyperlink and analyzing the characteristics presented in Table 1. As can be seen in Figure 4., all groups had similarities with the other groups, with only *Corona chat* having just a small amount fewer connections than the other groups. By dividing the similarities between alternative and mainstream, it directly portrays a comparison of the amount of the shared platforms. The mainstream media contained 615 edges in total, whereas alternative media contained 742. Although, this difference is not that noteworthy, the difference of what these edges consist of, show the same pattern as mentioned in the overview of the mentioned platforms. The edges created by alternative platforms consist of 134 differing platforms, where the mainstream media edges consist of 97 platforms. When evaluating the top ten most mentioned platforms within these edges we can also see the same pattern. Within the mainstream media edges the connection is mostly made by mainstream social media, with YouTube, Twitter and Facebook covering the top three and taking up 78,1% of the edges. The top three of the most mentioned platforms within the alternative media edges simultaneously consist of three alternative social media platforms, Telegram, Bitchute, and Rumble, however, this only takes up 50,5% of the edges. The links to Telegram contain links to other Telegram groups or channels. The platforms following the top three are mostly alternative news platforms. It is in this case challenging to conclude that potential echo chambers are constructed. The groups have many connections and seem to share similar articles, however, as also seen in the previous section, the links between the groups consist of many different platforms.

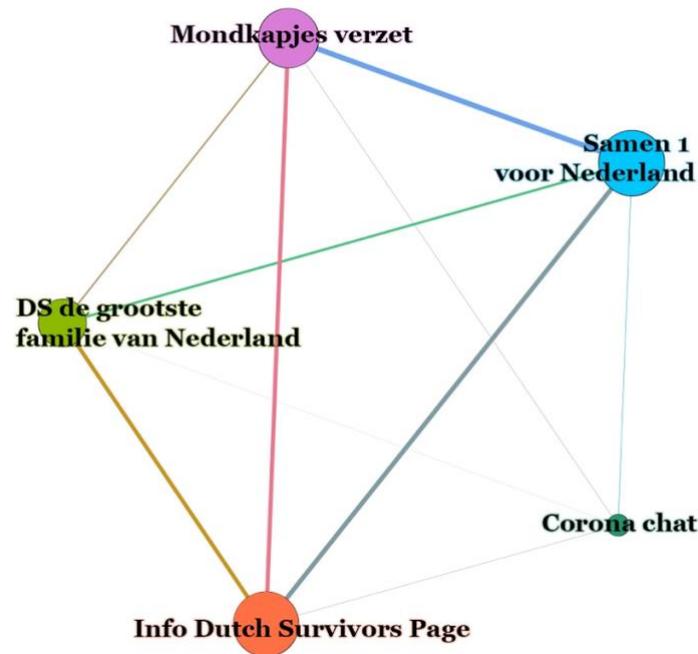


Figure 4. Network visualization connected by sharing the same alternative media message.

Alternative media play a large role within the shared media platforms, especially in comparison to mainstream media. Though, there are three alternative social media platforms (Rumble, Bitchute and Telegram) that are mentioned more frequently than other platforms and also contribute the most to the connections between the groups. After these three alternative social media platforms, they mostly refer to alternative news platforms. Hyperlinks to specific media messages corresponding to these alternative platforms are frequently shared in multiple groups, which causes all groups to share the same hyperlinks. Additionally, these connections also consist of many different platforms and links. Jamieson and Cappella (2008) mentioned selective exposure to be an engine for the potential constructions of echo chambers. Nevertheless, 'selective exposure' is not as set in stone, as many different platforms have been shared, but the extent to which this is selective is arguable. Therefore, it is, as pointed out by Dubois and Black (2018) in Chapter 2, a challenging task to understand the construction of echo chambers. Although alternative media do play a larger role, it does only take up 51,9%. It is therefore important to zoom in on how these links are shared and if the users discuss and potentially debate about the content of the platforms, which will be analyzed in the next section.

4.2. Framing alternative media

This section will analyze how the users of Telegram frame alternative media within the five groups. Due to the qualitative nature of this part of the analysis, just a small sample can be

analyzed. As mentioned in Chapter 3, the sample consists of the most mentioned articles of the 25 most mentioned platforms within the edges table. As these particular hyperlinks are mentioned frequently and by different groups, the framing analysis ended up examining 152 frames. These frames were then systematically coded according to Wieringa et al.'s (2018) adaptation of the encoding model. It often occurred that a hyperlink was sent without any added statement or message, or that the hyperlink was part of a forwarded message. On both occasions, the frame was coded as 'affirmative'. This coincides with Wieringa et al.'s (2018) approach where they coded a retweet as 'affirmative'. 'Affirmative' was the term used by Wieringa et al. (2018) to refer to messages encoded with a dominant-hegemonic position. As the coded messages are responses to alternative media messages, 'affirmative' means the user agrees with the shared message. The results of this analysis will be presented in two steps. First, the number of coded frames will be discussed and presented. Thereafter, the analysis will zoom in on certain messages and frames to gain a greater understanding of how the framing works. This section will then attempt to answer the sub question: *what role does the sharing behavior of the group members play in the construction of echo chambers?*

4.2.1. The coding

As shown in Table 3 all hyperlinks were shared concerning the content of the medium. Within 25 frames the medium was also discussed within the message, complying with McLuhan's (1967) famous remark "the medium is the message", which was the case in these several times. In these cases, the content of the medium was merely discussed because it had been removed from mainstream social media such as YouTube. Therefore, the medium already created the message. However, the platform was, within this sample, never the only point of discussion. Just three of all 152 messages were coded negotiated, with zero being oppositional. Both the negotiated messages were coded as twisting arguments. The first two messages that were coded as 'negotiated' were messages containing a link to a video on blckbx, an independent news channel. The message referred to the content of the video but was also shared to express anger towards YouTube for deleting the video. Therefore, they framed the message in a way that it supports another argument. The second negotiated message refers to a message in which they use the hyperlink to support a different argument.

During these coding practices, it became clear that it was common to share a hyperlink without adding any extra text. To understand the occurrence of this, an extra table with data has been created (Table 4). For this table, some recurring characteristics of the messages had been noted and counted to see how the shared messages are framed. For instance, it was very common to forward a previously created message without adding anything personally. Table 4 presents in what form a message was commonly framed. This table shows that many messages are forwarded

and that adding a personal statement is the exception rather than the rule. Adding to this, it is also not common to reply to such hyperlinks. During the close reading, it was noticed that members almost constantly share hyperlinks without any response. It, therefore, makes it difficult to understand the level of engagement with such messages.

Table 3. The coded frames.			
Subject of frame		Coding	
Medium	25	Affirmative	149
Content	152	Negotiated	3
		Oppositional	0

Table 4. The form of the message.			
Message form		Replies	
Forwarded message	95	No replies	143
Summary of the message	3	One reply	4
Added personal opinion	17	Multiple replies	5
No added message	30		

These tables represent an apparent pattern within all the groups. Many hyperlinks to alternative media are shared, but without stating any argument or responding. The next section will dig deeper into these numbers and will enhance the understanding of how the framing of alternative media is constructed.

4.2.2. Understanding the codes

The sharing of hyperlinks consisted of many forwarded messages. A noticed pattern was that many of the same forwarded messages were shared in different groups and also multiple times within the same group. Such a forwarded message rarely contains a message that indicates their reasoning behind forwarding the message. One forwarded message mentioned: *“Ik ontving het met de vraag of ik het wilde delen. Dus vandaar dat ik het deel.”* [I received this with the question if I wanted to share it. That’s why I shared it.]. This indicates the ease of sharing alternative messages without having a strong opinion about them. Additionally, some forwarded messages contained a similar statement in different words while referring to the same hyperlink. This shows that certain platforms and their messages were sent around in groups via multiple forwarded messages. A third noted pattern within these forwarded messages is the recurrence of names within different groups. In some cases, the links were shared by the group owners, or in other cases, the links were shared by the same person. This was seen on twelve occasions, where

the same person shared the same message in multiple groups. This was not only the case for forwarded messages, but also personally created messages, or even responses to certain shared hyperlinks. An example of this is the following message that an individual replied to the same article in three different groups: *“tering honden zijn het. En niet anders”* [They are monsters. And nothing else].

As mentioned before, these replies are not common. To some messages, the users responded with the confirmation that they agree with the message, or express that they are glad that it's shared. However, in a few cases when reading the conversations, it was also made clear that expressing an opinion against someone may result in a heavy debate. This could be due to one not believing the other. In these cases, the replier tends to ask for a second or scientific source. In another case, the opinion expressed against a shared message evoked a debate. An example of this can be taken from *Corona chat*, wherein a user (user A) responds on a different user's (user B) shared hyperlinks with the following: *“Zou je op willen houden met het doorsturen van die spam? Als we die berichten willen lezen dan abonneren we ons wel op die kanalen. Dat hoeft niet ook nog eens hier lijkt mij.”* [Could you stop spamming? If we wanted to read all those messages we would subscribe to those channels. We don't need that here.]. User A later mentions the disagreement with the content and calls it “off-topic”. However, this ended up in a debate around the freedom to express oneself, where other users of the group also joined in.

4.2.3. *The role of alternative media*

Alternative media seem to play a large role in the hybrid media ecology of coronavirus activism groups on Telegram. Whilst it may not appear to be very common in the top thirty most mentioned platforms, they are more prevalently shared within the groups in comparison to mainstream media. They also have a lot of resemblances between groups, where the same hyperlinks are shared in the same groups. This is usually caused by the forwarding of messages. All groups showed a strong use of affirmative framing codes, wherein almost all hyperlinks were shared because of their content rather than the medium. This represents the same outcomes as found by Wieringa et al. (2018) in their similar research on Twitter. In their analysis, they showed that 60-70% of their sample was coded ‘affirmative’. The difference could be due to their inclusion of mainstream media within the sample but could also be due to the different uses of the platforms. Their sample also showed that most news articles were used to discuss its content rather than the medium, which is the same as seen in this sample. The lack of responses builds on the conceptualization of an echo chamber in this research, in the sense that an echo chamber portrays a space that is insulated from rebuttal. Although some of these outcomes imply that echo chambers may exist, some other outcomes suggest the opposite. It is important to consider the large volume of shared platforms. The next chapter will zoom in on these outcomes and will

discuss the arguments this brings to the academic debate around alternative media within echo chambers.

5. Echo chambers are ubiquitous

All previous chapters have introduced the phenomenon of alternative media and echo chambers, sketched an understanding of the current academic debate and have attempted to answer all three sub questions leading to the main research question: *to what extent and how do alternative news and social media contribute to the construction of echo chambers within the hybrid media ecology of coronavirus activism groups on Telegram?* One argument that was made clear by multiple scholars was that an echo chamber is a hard concept to grasp and define. This research has shown that it is indeed a complicated phenomenon, especially when combining it with alternative media. The following chapter will discuss what this combination has exposed. As the title of this chapter might already hint towards, I believe echo chambers might be even more complex than previously thought. Different factors create different outcomes. Where some aspects tend to increase the construction of echo chambers, other elements take on a rather decreasing role. This chapter will discuss all the results and will place them in the contemporary academic debate. First of all, the concept and role of alternative media will be elaborated on, thereafter the framing practices within the Telegram groups according to the encoding model will be touched upon, followed by an in-depth discussion on the existence and construction of echo chambers.

5.1. A synonym for ‘alternative’

The following section will discuss the implementation of the theories regarding alternative media within the research by considering all statements made in Chapter 2. Earlier research mentioned alternative media to be ‘participatory progressive left-wing media’ (Downing, 2001), and whilst others already disagreed with such statements (Wieringa et al., 2018), this research has also denied this principle. Within these five Telegram groups, alternative media cannot be classified as either left or right. It was used more frequently than mainstream media (with over 50% of all shared hyperlinks), whilst these Telegram groups themselves cannot be defined as ‘right’ nor ‘left’. Another argument that can be made to not place alternative media on one side of the political spectrum is due to the sheer volume of different alternative media platforms, which was in this research over five hundred. Downing’s (2001) definition of alternative media as ‘radical media’ does touch upon an interesting thought. These groups are created having one topic in common “online coronavirus activism” and all groups had a larger focus on sharing alternative media rather than mainstream media. However, alternative media tended to focus on being against the content of mainstream media rather than their distribution practices, which was claimed by Gehl (2015) and Fuchs (2010). Fuchs (2010) imagined alternative media to endorse a non-capitalist economy that would contain no ideological content. Fuchs’ (2010) utopian

statement may need to be nuanced since neither alternative nor mainstream media can create content without any form of ideology being presented. Adding to this, in Chapter 2 I stated that non-standard methods are now more challenging to differentiate from standard methods. Whilst using non-standard distribution methods was one of Atton's (2002) characteristics of alternative media and was in some cases clearly represented, it was not as clear in other cases. This takes us back to a statement made earlier, the content of the platform is what made the final decision to consider a platform as either mainstream or alternative. In Chapter 2, it was this critical content characteristic that could be traced back to most scholars. Figure 5 presents an adapted version of the alternative media criteria table from Chapter 2. An overall answer to defines alternative media is therefore that the critical, or counter-hegemonic, the content of a platform is what makes a platform alternative. In some cases, this is also presented by having critique on media power or being a critical producer. Lastly, some platforms can be considered alternative due to their alternative creation and distribution practices. However, alternative media can be divided into two components: alternative news media and alternative social media. While both must contain critical content, alternative social media were also categorized by its policy in which freedom of speech is guaranteed. Rogers (2020) had also mentioned these policies to be the reason why Telegram itself is considered as an alternative social medium. A policy that highlights the essence of freedom of speech is the primary reason for Telegram to be categorized as alternative, which is also the main criteria for Bitchute and Rumble. However, for both Telegram and Rumble, the alternative appearance is rather on the background in comparison to Bitchute. To understand why Telegram and Rumble should be considered alternative it is important to read and understand its policy, whilst Bitchute's critical concept is clear at the beginning. For these reasons, and as shown in Figure 5, the basis of an alternative medium should be built on being critical towards hegemonic structures and therefore a synonym for alternative media is critical media. These insights and results can be a starting point for further research into the individual behavior within such alternative social media groups.

Creation & distribution	Critical producer	Critique on media power	Critical ideological content
Possibility	Important		Necessity

Figure 5. New criteria of alternative media

5.2. An alternative construction

The previous section discussed the conceptualization of alternative media and touched up the division between alternative news media and alternative social media. The next section will discuss these two phenomena in light of the construction of echo chambers. Chapter 4 presented all the outcomes from the research. From these outcomes, it has also been noticed that alternative news media and alternative social media play different roles within the creation of echo chambers. First, the role of alternative news media in the construction of echo chambers will be discussed, followed by the elaboration of the position of alternative social media and ending with a critical reflection on the conceptualization and existence of echo chambers.

5.2.1. Alternative news media in the echo chambers

Alternative news media had a rather decreasing role when it comes to the construction of echo chambers. This research has shown that these groups consume many different platforms, as 978 different platforms were shared within the groups, with 51,9% of these platforms being alternative. The lowest number of different shared platforms in one group was 135. These alternative platforms do contain some alternative social media platforms. Nonetheless, the amount of differing alternative social media platforms was limited, though very prominent, which will be expanded on later. The same happened when looking at the similarities between the groups. Hereby, alternative news media were also relatively present. Webster (2005) pointed out that audience fragmentation was starting to occur due to the increasing number of television channels. Webster (2005, p. 379) referred to this development as “dystopian portrayals.” The applied definition of echo chambers in this research suggests that individuals binge certain channels over others, a development touched upon by Webster (2005) The aforementioned results show that these users consume a large portion of news media. Therefore, the act of bingeing cannot be allocated to these groups. Their media diet consists of many varying alternative news platforms. Alternative media have exposed these group members to many different platforms and thus viewpoints, from which they would personally have to select what they read and what they do not. Due to this, alternative news media can be considered as having a decreasing contribution to the construction of echo chambers on Telegram. This research has not focused on the content of these alternative news media, but because of the high number of different platforms, it can be assumed that the members have been exposed to different news perceptions. While alternative news media tend to decrease the creation of echo chambers, alternative social media increase the construction of echo chambers.

5.2.2. Alternative social media in the echo chambers

Alternative social media played a different role than alternative news media within the echo chamber creation. Where alternative news media broaden the scope of media that the users are exposed to, alternative social media made more room for echo chambers to arise. Telegram was the platform that created the most edges. This means that the groups sent the same hyperlinks as the other groups corresponding to Telegram groups. This can be considered as a certain echo as it brings the members to new groups with the same beliefs, which was considered as one aspect of an echo chamber. During the close reading of the shared hyperlinks, it was noticed that it was common to forward messages. These same messages were sent in multiple groups, rarely indicating the reason for forwarding the message. Following up on the previous statement, it was also noticed that some groups contained the same members that share and forward the same messages, which adds to the aforementioned echo. This indicates the role Telegram plays in the construction of echo chambers. Whilst this research did not analyze the affordances of Telegram, the behavior of the users on Telegram cannot be disregarded. Nevertheless, this was also seen for other social media platforms such as Rumble and Bitchute. These three social media platforms took up a large portion of the edges for the network analysis (50,5%), as were they all represented at the top of the thirty most mentioned platforms. Although the group members are exposed to many different platforms, a large portion of this is taken up by only three alternative social media platforms. This may impact the binging behavior. This interplay between alternative news and social media impacts the creation of echo chambers. Therefore, the following section will discuss the phenomenon of an echo chamber as a whole. It will bring back the findings of this research and place it within the contemporary debate around the conceptualization of echo chambers.

5.2.3. The inevitability of selective exposure

It is no news that the (non)existence of an echo chamber is rather difficult to grasp and widely debated, which is also shown in this research. It is now important to turn back to the final applied definition of an echo chamber as stated in Chapter 2: *an enclosed media space where the individuals binge specific platforms and where only certain beliefs and ideas are shared that are insulated from rebuttal*. This research shows that these groups cannot be considered “enclosed media spaces”, due to their mentioning of other social media platforms and even other Telegram groups, expanding the border of the media space. At the same time, this also causes a space where only certain beliefs and ideas are shared. Additionally, the shared hyperlinks were insulated from rebuttal as this potentially caused debate and it seemed uncommon to express counter-arguments. Nonetheless, does the number of shared platforms decrease the idea of an echo chamber, mainly due to – what I will refer to as – their ‘sharing culture’. For instance, it was very common to forward a previously created message without adding anything personally. The

corpus consisted of 8197 diverse hyperlinks, of which 4254 linking to alternative platforms. This represents the culture of sharing, where the members easily and continuously share hyperlinks without discussing its content. Due to this consistent sharing of information, selective exposure becomes inevitable. The high-choice media environment outside the Telegram groups is on itself large and causes selective exposure to be necessary. As the high-choice environment is also reflected within the groups, the users then also need to select the platforms and content they wish to read. Therefore, an echo chamber should not be considered as something merely created by technology. The rise of new media also opens up new voices, new perspectives, and more to consume. Alternative media have also exposed these group members to many different platforms and thus viewpoints, from which they would personally have to select what they read. Future research could approach echo chambers from a social constructivism perspective, as previous research (including this thesis) has approached echo chambers from a technological determinism point of view.

6. Conclusion

This thesis has revealed how potential echo chambers can be constructed within Telegram groups. Previous research had a strong focus on the creation of echo chambers within the mainstream social media environment, mainly on Twitter. Therefore, this research analyzed these occurrences on the alternative platform Telegram, as such a platform offers more freedom of speech to its users. This thesis attempted to answer the main research question: *to what extent and how do alternative news and social media contribute to the construction of echo chambers within the hybrid media ecology of coronavirus activism groups on Telegram?* Due to the contemporary corona crisis and the migration of coronavirus activists from Facebook to Telegram, the focus has been on coronavirus activism groups. The answer to this research question is divided into two parts; the increasing function of alternative social media and the decreasing position of alternative news media.

In Chapter 2, the developments within the high-choice media environment we live in were grouped under the umbrella term “hybrid media ecology”. A hybrid media ecology refers to the interplay between a high-choice media environment and the enlargement of echo chambers. In this chapter, the division between alternative social media and alternative news media was already slightly represented. The division was created by the differing research that had been done. Most research tended to focus on one of the forms of alternative media. Where alternative social media were approached as platforms where users relocate to avoid the commercial sphere of mainstream social media. Alternative social media were discussed in light of its policy and goal, whereas alternative news media were mostly defined by its specific content. These discussions led to the debate around audience fragmentation ending in echo chambers. In this section, an echo chamber was eventually defined as an enclosed media space where individuals binge specific platforms and where only certain beliefs and ideas are shared that are insulated from rebuttal. Throughout the research, this definition was the basis of the discussions and arguments.

The use of close and distant reading was described in Chapter 3. The thesis implemented different approaches to tackle and understand the data. Chapter 4 started with a frequency overview of the use of alternative media within the groups. This overview gave the first impression that alternative media play a large role within the groups, resulting in the first step in answering the research question. It was now of importance to understand the existence of an echo chamber. In this way, the contribution of alternative media in the construction of the echo chamber could be estimated. The network visualization and the analysis of the framing practices functioned as methods to understand if the eventual definition of echo chambers could be traced back to the groups. Chapter 5 discussed the process of the research and the findings considering the theories discussed in Chapter 2. The chapter discussed the difficulty of labeling online

environments as echo chambers. For a space to be considered an echo chamber, it must meet certain requirements, referring to the definition of what an echo chamber is. While understanding whether the Telegram groups are in some way fuel for echo chambers, it became clear that alternative media need the division discussed in Chapter 2.

Although this research has created academically relevant insights, it also has some limitations, which have created new questions. First of all, as this research only focused on the shared links and the corresponding messages, it would be of interest to analyze the behavior of the members in all other conversations. Insights can be gained through participant analyses to gather information about the motivations of such group members. Second, future research would benefit from a critical discourse analysis of the shared platforms, as this research did not focus on the exact content and ideological position of the platforms. This could contribute to knowing whether certain beliefs and ideas are continuously shared. Combining these recommendations will lead to a broader understanding of the opportunities and fallacies of alternative media and will eventually lead to a better understanding of the possible construction of echo chambers.

In conclusion, alternative social media and alternative news media play a different role when it comes to how and if they contribute to a deeper level of audience fragmentation. Alternative social media tended to contribute more within the large environment as it affords a space where only certain beliefs and ideas are shared and where discussion about topics is out of the ordinary. Additionally, three alternative social media (Telegram, Bitchute and Rumble) were mentioned frequently and in different groups. On the contrary, alternative news media caused many different platforms to be shared, causing the group members to be exposed to many different opinions and views. The debate around echo chambers is a debate that has been growing over the past years. Contradicting research has been conducted and the concept has been defined in many differing ways. This research has also discovered new outcomes. Future research should not neglect the phenomenon, but should rather build upon this and previous research to gain a better understanding.

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