

# Climate Change on TikTok

Investigating the Impact of Viral Videos about Climate Change on Adults

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## **Abstract:**

Due to the rise of audiovisual social media apps such as TikTok, anyone can participate as a communicator or listener in the climate change discourse. This thesis explores viral TikTok videos about climate change, their usage of narrative elements and predominantly their impact on adults below 30 on an individual level. A content analysis revealed that most videos use helpless storylines to communicate climate change. Using focus group discussions, viral TikTok videos with different plot themes were shown to adults and discussed to get an insight into the potential impact. The results show that negative messages can cause negative emotions. Positive messages can influence the viewer and inspire them to combat climate change, but most importantly, a call-to-action is needed. Lastly, TikTok helps to keep climate change within the discourse, and it gives an insight into how the younger generation feels about the issue.

**Keywords:** Climate Change Communication, TikTok, Storytelling, Science Communication, #ClimateChange, Narratives

**Word count (thesis): 12 000**

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# 1 Introduction

The impact of climate change communication on the general public is an important topic that has been discussed and researched by experts since the late 90s (Nerlich et al., 2009). Nevertheless, climate change is still an urgent issue many decades later despite all the communication efforts. In recent years, the possibilities of climate change communication have grown due to the rise of the internet and audiovisual focused communication (Nicholson-Cole, 2005). Not only have the communication platforms changed but also the communicators. Due to the rise of social media, climate change communication has moved away from scientists as the sole communicator of the issue (Schäfer, 2012). Social media is now also used to communicate topics from the public to the public.

The internet and social media bring forward an abundance of opportunities, especially when it comes to visual communication with apps like Instagram, YouTube and TikTok. Despite that, research concerning online climate change communication heavily focuses on the social media app Twitter, which consists primarily of written communication (Pearce et al., 2018). This is because the research mainly focuses on science communication, and scientists are primarily found on Twitter (Pearce et al., 2018). Pearce et al. (2018) suggest that future research within the field should move away from science communication and focus more on qualitative studies and visual communication on other platforms that are more suitable to understand how the public views climate change and what role it plays in their life as well as their future.

In recent years, one of the most popular apps has been TikTok (Iqbal, 2022). In 2020, TikTok was the most popular app, with 738 million downloads and 1.1 billion active users worldwide (DigiView, 2021). TikTok as an app concentrate on audiovisual communication. The users can upload short videos up to three minutes long. Users of TikTok often engage in storytelling and use emotions and personal narratives to communicate about climate change (Hautea et al., 2021).



## 1.1 Aim of Research Questions and Contribution to Sustainability Science

This study aims to look closely at the viral content on TikTok. In a pre-study, it is to be found out how climate change is communicated on TikTok and what content goes viral. The central part of this thesis will look into how the particular communication impacts adults below 30. The research question is split up into three parts:

- ❖ How do viral TikTok videos about climate change impact people's emotions, willingness to share content and their engagement in climate change issues?
  - How do viral TikTok videos about climate change impact people's emotions?
  - What makes people want to share viral TikTok videos with friends and family?
  - What kind of content inspires people to potentially act on climate change?

This research is relevant to sustainability science to understand further how climate change is communicated on TikTok and how this affects views and actions towards climate change. Sustainability science tries to understand complex human-nature interactions and is transdisciplinary (Clark & Dickson, 2003). To understand complex sustainability problems and the impact society and nature have on each other, insight from multiple fields and stakeholders is needed (Lang et al., 2012). As part of science communication, climate change communication connects environmental communication and sustainability science. Furthermore, it helps to link sustainability science knowledge with action (Lindenfeld et al., 2012). Communication is also essential for sustainability science to connect different stakeholders and bring people together to work towards a collective future (McGreavy et al., 2013). This also includes the communication of sustainability topics on social media. Additionally, audiovisual communication has gained importance on TikTok and on many other social media platforms. It provides a good foundation for the usage of storytelling. As already mentioned in the introduction, climate change communication must move on from research primarily focused on Twitter and further focus on new media. As Pearce et al. (2018) suggest, looking at visual platforms is vital to discover more about people's views and understandings concerning climate change and how those views impact the content viewer.

## **1.2 Outline of the Thesis**

In chapter two, this thesis provides background information about the history of climate change communication and its place within science communication. Furthermore, this chapter will give insights into the social media app TikTok and climate change communication on TikTok. Chapter three talks about the theoretical framework of this thesis. Firstly, the concept of storytelling is explored. Secondly, this thesis gives an overview of the Narrative Policy Framework and its different narrative elements. Lastly, chapter three dives deeper into the micro-level of the Narrative Policy Framework and how this level is relevant for this thesis. In chapter four, the data collection for this thesis is explained, and limitations and ethical considerations are communicated. The analysis part, chapter 5, focuses on the results and findings from the focus group discussions and content analysis. These findings are then discussed in chapter 6. The last chapter, chapter 7, deals with the conclusion of this thesis and the reflection.

## **2 Background**

This chapter tries to give an overview of the research that has been done on the topic of climate change communication. Firstly, the role of climate change communication within science communication is explored. After, the importance of visual communication and the change from traditional communication to online communication is analysed. Lastly, this chapter will give insights on the social media platform TikTok and existing research on climate change communication on TikTok.

### **2.1 Climate Change Communication**

Climate change communication has its roots within science communication and uses plenty of its theories and ideas. The beginning stages of science communication heavily relied on the knowledge deficit model. The deficit model assumes that the general public consists of laypeople who need knowledge and education to act according to scientific findings (Reincke et al., 2020). Therefore, the model proposes improving science education and the public's scientific literacy so informed decisions can be made, positively influenced by their newfound scientific knowledge (Simis et al., 2016).

From the early stages of the deficit model, science communication moved to a model of public engagement and dialogue. This model still sees importance within the scientist or expert of a field as a communicator to the public. However, it also acknowledges that successful science communication can only occur if the public is engaged in the process and valued as people with knowledge to learn from (Reincke et al., 2020). Even though it is well known now that the knowledge deficit model is not as successful as other models within science communication, such as the model of public engagement, it is still prevalent within the field these days.

Simis et al. (2016) see the reason for the popularity of the deficit model in many different factors, such as scientists' view on the public, its simplicity for policy design, and its good match with the education system. They found out in their research that many scientists view the public as an "other", with some even connecting the public with negative attributes that go well with the ideas of the deficit model. Furthermore, Simis et al. (2016) also suggested that the deficit model and its simplicity fit the views of policy-making, and the intentions of the deficit model also overlap with the structure of many traditional educational systems.

However, climate change communication has dealt with specific issues over time which have not been necessarily typical for many other fields within science communication. In the beginning, the uncertainty and invisibility of the topic brought forward challenges for experts within the area (Nerlich et al., 2009). Scientists were still debating about the anthropogenic nature of climate change, and the

invisibility of the issue made communication difficult (Nerlich et al., 2009). Nowadays, climate change is primarily accepted as anthropogenic, but the issue's complexity remains (Nerlich et al., 2009). Climate change is a scientific topic that is heavily politicised, often more so than other scientific topics (Boykoff, 2008). This adds to the issue's complexity since multiple stakeholders and different interests are involved (Boykoff, 2008). Furthermore, the idea behind climate change communication evolved from convincing the public about the reality of climate change to persuading the public to take political or practical action to deal with it (Nerlich et al., 2009).

To overcome many of these issues, climate change communication borrows from different theories within communication studies and psychology. Since many of these issues still surround the complexity of the topic that is connected to the difficulty of the human brain to understand 'long-term geological time scales' that go beyond a lifetime (Boykoff, 2008), theories from psychology research are being used to see the impact climate change communication has on the people and how it affects them (Nerlich et al., 2009). Rooted in this idea is also the research of frames, emotions and storytelling in climate change communication. Research has shown that specific frames used to communicate climate change can affect people's attitudes and behaviour (Levine & Kline, 2017). For example, communicating health risks as frames within climate change communication influences the environmental attitude of the people (Levine & Kline, 2017). Nevertheless, Levine and Kline (2017) ask communicators to be careful with their usage of frames because there is also the possibility that the same frame might have the opposite impact on public opinion and collective action.

The same caution should also be taken when it comes to the influence of emotions through communication. Chapman et al. (2017) propose in their research that emotions should not only be seen as a way to manipulate people's behaviours and attitudes but rather also as a possibility to analyse feedback to understand people's responses to decision making processes. Thus, emotions influence people's opinions and behaviour and tell a lot about attitudes and responses (Chapman et al., 2017). This shows that climate change communication does not only have to be a one-way street to persuade people to environmentally friendly behaviour, but it can also be a learning tool for climate change communication to understand people's responses to climate change and change the messages to meet their needs rather than change their emotions (Chapman et al., 2017).

Another drastic change in climate change communication within the last few years comes from the technical changes and possibilities the internet and other media tools provide. Technologies allow us today to better visualise climate change and predict and visualise future changes in our environment (Nicholson-Cole, 2005). However, when it comes to visual communication, one must be aware that images have different impacts on different people due to their cultural backgrounds and distinct ways

of interpreting images (Nicholson-Cole, 2005). Nevertheless, the visualisation of climate change can inspire people, and it can aid in visualising processes (Nicholson-Cole, 2005). Furthermore, visualisation within the arts can step away from science and research findings on climate change and further explore the territory of values and emotions (Roosen et al., 2017). Additionally, it can be a way of expression for people. Embed metaphors and narratives let the audience connect with the issue on a deeper level (Roosen et al., 2017). One place that is ideal for visual communication that has gained importance for climate change communication in the past years is the internet (Schäfer, 2012).

## 2.2 TikTok and Climate Change

The internet is an ever-changing space of different communication styles and new social media trends. This also means that new possibilities for climate change communication develop rapidly. Furthermore, the preferred communication on social media has changed significantly in recent years. While Facebook and Twitter concentrate more on written text and occasional pictures or videos, the importance of visual communication has increased with the emergence of Instagram, Snapchat and TikTok. Recently, especially TikTok has seen a rise in popularity. In June 2021, it reached 3 billion downloads and was ranked the seventh most downloaded app in the 2010s (Iqbal, 2022). TikTok is especially popular with the younger generation, and over 60% of the users globally are under 30 (Iqbal, 2022). The app was first launched under the name Doyouin in September 2016 in China. After gaining popularity, an international version of the app was launched a year later.

TikTok users can upload videos up to three minutes long. While TikTok gives users the option to follow other accounts and be followed by people, gaining followers for exposure is slightly less important than on other social media apps. Many users watch content on the 'For-You'-page, which shows videos decided by the TikTok algorithm. The TikTok algorithm shows videos to its users based on relevancy and interests.

In 2021, Basch et al. conducted a content analysis of the 100 most popular English-speaking videos on TikTok related to climate change using the hashtag climate change. During the study in August 2020, the #climatechange had 653.7 M views. In February 2022, the hashtag was at 1.5 billion views and in April 2022 at 2.1 billion views (Figure 1). Basch et al. (2021) showed that only eight of the 100 videos were posted by professional sources such as environmental organisations or scientists. This indicates that most people communicating about climate change on TikTok are laypeople within the field. These findings from Basch et al. (2021) also concur with the conclusions of Schäfers' (2012) study about online climate change communication. Schäfer (2012) found that scientists engage in climate change communication, but they are still the minority in the discourse. NGOs and laypeople are represented in more significant numbers online to communicate and discuss climate change (Schäfer, 2012). Furthermore, the study conducted by Basch et al. (2021) displays that all videos mention natural disasters. Most videos communicate climate change as an anxiety-provoking issue and use climate doom as a popular narrative.



**Figure 1.** Screenshot of the main page for #ClimateChange on TikTok (Screenshot taken from TikTok on 25.04.2022).

Hautea et al. (2021) studied climate activism on TikTok, and their findings confirmed that young non-expert users dominantly produce climate messages. Additionally, their research showed that the climate change messages that are being communicated are "...simultaneously earnest and mocking, alternate between care and indifference, rely heavily on repetition and variation of existing music and visual memes, seek imperfectly to inform on climate and environmental issues—and, sometimes, simply 'hijack' the zeitgeist created by trending climate-related hashtags to gain attention for some other purpose" (Hautea et al., 2021, p. 12). The general findings identified by Hautea et al. (2021) suggest that the creators repeatedly use certain expressions that show that they mix environmental and climate-related issues, which display vague and imprecise knowledge about climate change. The study also shows that the users feel helpless and pay strong attention to generational differences (Hautea et al., 2021). Looking at the format of TikTok videos, individuals like to communicate through storytelling and use personal narratives with hashtags and viral sounds (Hautea et al., 2021).

### **3 Theoretical Framework**

This chapter discusses the theoretical framework of this thesis which consists of the Narrative Policy Framework (NPF) as well as theories and ideas embedded in this framework. Firstly, this chapter will address storytelling as a phenomenon and the concept of narrative. Following this, the NPF will be explained with a particular emphasis set on the micro-level of the NPF.

#### **3.1 Storytelling and narrative**

The different ideas and theories of storytelling are used for research within various fields, and they have been researched for many decades now (van Laer et al., 2014). Narratology studies narratives, which are works with a storyline. The idea of narrative "is the meaningful representation of events which are related to each other in a timewise and causal manner by using different instruments" (Seyfi & Soydaş, 2017, p. 48). Outside of research, storytelling has been embedded in society and cultures for as long as we can remember (Jones, 1996). Human beings evolve the ability to tell stories and engage with storytelling from a young age, and stories can help understand and process complex topics (Jones, 1996).

"A good story can help us look at the world in a new way, can even direct our search. But there is another side: a story or paradigm can also prevent us from seeing what is in front of our eyes" (Jones, 1996, p. 657).

The ideas of storytelling are also often used within science and climate change communication (Bloomfield & Manktelow, 2021). Bloomfield and Manktelow (2021, p. 5) found out in their study about climate change communication and storytelling that narrative elements can "increase understanding of climate change and support for climate mitigation". In another study on storytelling and climate change, Otto (2017) used digital storytelling as a teaching method with students to see the effects of digital storytelling on students within higher education. Digital storytelling started as a teaching method in the 1980s to let students engage with storytelling using multimedia tools (Garcia & Rossiter, 2010). With this method, students can communicate their own stories about a particular topic to the class (Garcia & Rossiter, 2010). Otto (2017) discovered that this approach increased the students' knowledge of climate change and showed how it is perceived by the students and impacts them differently.

Since the 1980s, digital storytelling has moved on from the solely educational school environment and can also be found within social media. Many social media platforms such as Instagram, Snapchat and TikTok allow individuals to communicate their stories to the world using multimedia tools.



### 3.2 Narrative Policy Framework

Like other narrative theories, the Narrative Policy Framework (NPF) also agrees that we, as humans, are storytelling animals, also known as homo narrans (Jones et al., 2014). Stories play an essential role in our private lives, and even our thoughts and emotions seem to be organised by stories. Jones et al. (2014) propose that stories play a fundamental role within human existence and, therefore, must also be an essential aspect of collective actions and public policy processes.

The NPF approach agrees with some parts of post-positivist thinking, for example, that concepts are not created equal and differ in stability, while still believing that the world around us is bound by natural laws (Jones et al., 2014). Concepts that lack stability are often socially constructed (e.g., gender, race, environment) and form the core of policy debates as well as often bear the source of disputes within a society (Jones et al., 2014). Furthermore, the NPF accepts that there is an objective world out there, but concepts within that reality and the meanings within those concepts can change (Jones et al., 2014). An example of this is climate change. The NPF agrees that the global temperature change is a fact (a material condition), but social actors with different belief systems can associate different risk factors or concepts with this fact (Jones, 2011). NPF studies socially constructed realities using scientific methods, so it uses an objective epistemology (Jones et al., 2014) and is grounded in social ontology (Jones, 2011). It studies policy narratives on a micro-, meso- and macro-level to further explain policy outcomes, processes, and designs (Jones et al., 2014).

While the NPF is mainly used within the discipline of public policy, it is an interdisciplinary approach used within fields such as philosophy, psychology, marketing and communications (Jones, 2011). In other words, the discipline does not matter for the NPF as long as there is a policy component represented (Jones, 2011).

When looking at the structures of narratives, NPF suggests that narratives often have a combination of four narrative elements (Jones et al., 2014). These narrative elements are the 'setting', 'characters', 'plots' and 'moral of the story'. The 'setting' of the story is known as the stage, and it includes taken-for-granted facts that exist and are accepted without too much attention or thought (Jones et al., 2014). 'Characters' can be individual humans but also abstract and broad categories such as "the people" or "the environment" (Jones et al., 2014). The 'plot' connects different 'characters' and the 'setting' of the story and usually has a beginning, middle and end. The 'moral of the story' usually offers policy solutions. However, when it comes to topics like climate change, it can also concentrate on the uncertainty of a piece of evidence or a specification of a problem to which a solution is needed (Jones et al., 2014). This thesis concentrates on the two narrative elements 'plot' and 'moral of the story' to

answer the research questions. Due to the scope of this thesis, the 'characters' and 'setting' will not be covered in-depth, but they are naturally included in the 'plot' since the 'plot' binds these two narrative elements together. Furthermore, it is essential to look at the 'moral of the story' to answer the last part of the research question because this narrative element can potentially inspire people to act on climate change.

### ***3.2.1 NPF on the micro-level***

The NPF operates on three different levels of analysis called the micro-, meso- and macro-level. The micro-level is also known as the individual level. The NPF encourages research on the relationships between narratives and individuals on this level (Jones et al., 2014). The meso-level is the group level and contains research on the influence of policy narratives on the outcomes of wins and losses in the policy arena (Shanahan et al., 2013). Lastly, the macro-level is the cultural and institutional level. NPF studies on this broad level are rare, but they could research the role of culture and institutions on the policy process (Shanahan et al., 2013). It is understood that the three levels operate contiguously, but they are also known to interact (Jones et al., 2014).

This thesis focuses on the individual level (micro-level) of the NPF to discover more about the impact of certain narratives used within climate change communication on TikTok on the individual viewer. The micro-level of NPF mainly explores "how policy narratives affect individual-level preferences, perception of risk, and opinion related to specific public policy areas" (Shanahan et al., 2017, p. 183). The most common methods of the micro-level are experiments, interviews, focus groups and cluster analysis to gather data in the form of surveys or transcripts (Jones et al., 2014). Many of the studies conducted on the micro-level of the NPF model are rooted within fields related to psychology and draw from several other areas of inquiry (Jones et al., 2014). The ideas and hypotheses within the micro-level of the NPF borrow from different narrative theories. Examples of this are narrative transportation, narrator trust, and narrative characters' power (Shanahan et al., 2017).

Some of the disadvantages of NPF research on the micro-level include the possible differences in experimental conditions and the realities of public policy-making, as well as the rarity of natural experiments (Shanahan et al., 2013). On the other hand, the individual level helps understand the relationship between narratives and individuals. This is important for the NPF to understand further how narratives shape the public policy process on the larger meso- and macro-levels (Jones et al., 2014).

## 4 Methodology

This chapter explains the methodological approach used in this thesis to answer the research question. The methodological approach is divided into two parts. Firstly, as a pre-study, a content analysis of the top 100 videos within the #climatechange on TikTok was conducted to see how the different narrative elements concerning 'plot' and 'moral of the story' are represented in viral TikTok videos about climate change. After grouping the videos and gaining a further understanding of the content, four focus group discussions were carried out to further research the impact specific plot themes have on the viewer.

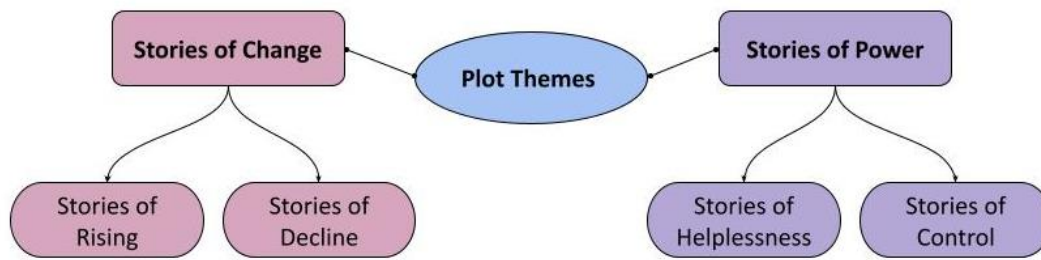
### 4.1 Content Analysis

The content analysis was carried out in February 2022 and did not serve as the primary method of this thesis. Instead, it should be seen as an essential part of the research in deepening the understanding of specific narrative elements concerning the videos of interest. Due to the complexity of TikTok with multiple elements that could be analysed in terms of narrative aspects (e.g., music, narrator, the protagonist of the story, text), it was crucial to focus the research and minimise the complexity. The content categories for the analysis were formed with the help of the narrative elements represented in the NPF. As mentioned before, the focus of this analysis was put on the two narrative elements: 'plot' and 'moral of the story'.

The NPF recognises that narratives have generalisable structural elements that distinguish them from other communication forms like frames and memes. However, the NPF does not define what those elements are precisely (Jones & Radaelli, 2015). For this content analysis, only videos that showed a 'plot' and a 'moral of the story' were considered relevant. Furthermore, non-English-speaking videos were also excluded from the study. A 'plot' connects the different characters of a story and the story's setting (Jones & Radaelli, 2015). An example of a climate change 'plot' on TikTok is a doomsday scenario that shows that if we do not find a policy solution for climate-related issues, the earth and humanity will not survive. The 'moral of the story' can show a policy solution or a problem specification to which a solution is needed (Jones et al., 2014). An example of this in a climate change context might be a call for politicians to cut emissions in half every decade or a request to the viewer to sign a petition.

This analysis uses a coding system, inspired by Stones' (2012) research on universal plot themes based on the NPF, to categorise the different TikTok videos in terms of 'plot'. When it comes to the 'plot', Stone (2012) distinguishes between stories of "change" and "power" (Figure 2). Stories of power include the themes 'stories of helplessness', which show stories with a plot focused on the lack of options to turn things around for the better and 'stories of control', which focuses on how control can be gained back to fix the situation. When it comes to stories of change, there are 'stories of rising',

which show an improvement of a bad situation, as well as 'stories of decline', which show a (worsening) condition with a solution on how to fix the problem (Stone, 2012).



**Figure 2.** The different plot themes (author's creation based on Stone, 2012).

## 4.2 Focus Group Discussion

To answer the research question for this thesis, four focus group discussions were conducted. Focus group discussions are helpful for in-depth research of a social science topic, but they do not give a representative sample for the whole society (O.Nyumba et al., 2018). When it comes to uncovering people's views, reactions, and beliefs, focus group discussions are suitable (Mishra, 2016).

Regarding the sample size of focus group discussions, the literature shows no general answer about how many discussions are needed for sufficient data collection (Guest et al., 2016; Hennink et al., 2019; Mishra, 2016). According to an analysis by Guest et al. (2016) of focus group discussions, 90% of the essential topics for the data are covered after three to six discussions. The number of participants within a focus group discussion also depends on the context and availability of suitable participants (Mishra, 2016). Focus group discussions can be held with participants with the same background experiences, or they can be a mix of different participants with different views (Mishra, 2016).

For this thesis, participants with the same background were grouped to see if the topics of discussions differed for the individual focus groups. The four identified attributes for the participants were 'Environmental Students' who have profound background knowledge about climate change, 'Non-TikTok-User' who are not familiar with the communication style of TikTok, 'TikTok-User' who are regular TikTok users and 'Media and Communication Students' who have academic background knowledge on communication. The participants were recruited through social media and were all below 30 years of age to fit the most common age group of TikTok users (Statista, 2022).

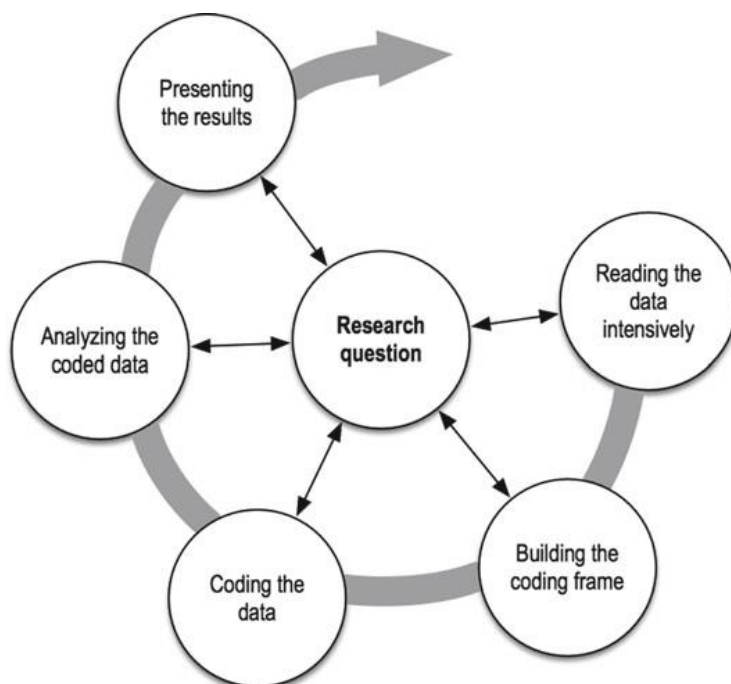
The focus group discussions were conducted and recorded online on Zoom, and the transcripts were written in NVivo 12. Each group consisted of four or five participants, and the meetings for the group discussions lasted up to 1.5 hours. The discussions were semi-structured with open-ended questions.

Open-ended questions in focus group discussions allow participants to explain their viewpoint in-depth and encourage others to think about new ideas and brainstorm (Adams, 2015). A semi-structured discussion allows for follow-up questions and the expiration of unforeseen ideas and views (Adams, 2015). The questions for the discussions were formed based on the findings of the content analysis, the background research, the theory, and the research question.

As mentioned above, in the chapter on the content analysis, the most viral TikTok videos within the hashtag climate change were grouped into 'stories of helplessness', 'stories of control', 'stories of rising' and 'stories of decline'. Before the discussions, the participants were shown three viral TikTok videos for each plot theme. The participants were encouraged to take notes while watching the videos, and they were allowed to watch the videos multiple times due to the fast nature of TikTok. The participants were not informed about the meaning behind the different plot themes to avoid biases during the discussion. Every group discussion watched the same videos in the same order to have comparable results. Before the discussions and after watching all the videos, the participants filled out a short survey to capture their initial reaction. This part of the discussion lasted 15 to 30 minutes, depending on the participants. The following discussions lasted 30 minutes to one hour.

### 4.2.1 Analysis of the Focus Group Discussions

To analyse the focus group discussions, they were transcribed with the help of the programme NVivo 12. The focus group discussions produced qualitative data that was studied and coded to analyse and discuss the research findings to answer the research question. Qualitative data is usually repeatedly analysed in several cycles (Kuckartz, 2019). As seen in figure 3, the qualitative analysis of the data was split into five phases; it was read intensely and coded multiple times. After that, the data was analysed, and the results will be presented and discussed in Chapters 5 and 6.



**Figure 3.** The five phases of qualitative content analysis (Kuckartz, 2019, p. 186).

To code the data, an inductive approach was used. With the inductive approach, the data and analysis are driven by the participants' knowledge and experiences instead of a deductive approach based on pre-existing theory (Azungah, 2018). When it comes to inductive coding, the codes are developed directly from the data. The codes created within the first cycle of coding are often narrow to catch the complexity of the data. For the second cycle of coding, broader codes and higher-level categories are created (Skjott Linneberg & Korsgaard, 2019). After the second cycle of coding, five higher-level categories were created. The higher-level categories were created based on the codes and the research question. Every code was subordinated to one higher-level category. The five higher-level categories are (1) codes related to the four plot types used in the videos, (2) codes that are immediate

reactions of the viewers to the videos, (3) codes that talk about the message and content of the videos, (4) codes that are related to TikTok as a platform, and lastly, (5) codes that talk about possible actions. For the last two steps, the coded data was analysed again to draw conclusions, answer the research question, and present interesting findings.

### **4.3 Reflections and Limitations**

Due to the ongoing pandemic and a broader selection of participants, the focus group discussions were conducted online via Zoom. The positive aspects of this are the greater availability of suitable participants and the straightforward way of recording and data collection. However, conducting a group discussion online also brings challenges. Some of the participants had trouble with their internet connection during the discussions. This sometimes led to intelligibility problems. Most discussions were carried out without significant disruptions, and the participants were mindful and respectful of each other.

The participants were sent the link to the videos and were allowed to rewatch them multiple times since TikTok videos are fast and designed to be watched more than once. This led to some people being slower while watching than others. Furthermore, some discussions were dominated by individual participants. This might have led to overrepresented viewpoints because more introverted people might not have felt comfortable speaking up. Additionally, there would have been at least one control group needed for each discussion to compare the different backgrounds of the participants with each other. There were differences in the noticed impact of the videos on the different groups, and they are interesting to point out, but they are not representative due to the lack of control groups. Furthermore, the participants of each group had the same background, but people had multiple interests and could have been participating in multiple discussions. For example, some of the participants for the environmental group could have also participated in the non-TikTok-user or the TikTok-user group.

The videos chosen for the focus group discussions were not the 12 most popular videos but rather a mixture of different videos within the top 100 to get a better understanding and a broader overview of the different plot themes used to communicate climate change on TikTok. Since the focus group discussions were limited in time, only 12 videos were chosen so that the participants still had time to discuss. Nevertheless, this means that the selection of videos might be biased.

Lastly, all the participants were over 18 during the discussions. 25% of the American TikTok users in 2021 were under the age of 19 (Statista, 2022). This means that an important target group for TikTok videos was not present in the discussions. 20 to 29-year-olds are only the second biggest target group

of TikTok (Statista, 2022). I decided to focus on the second biggest user group because of the ethical limitations and considerations needed while working with teenagers below 18. This study would be interesting to carry out with younger people for future research.

#### **4.4 Reflexivity**

My background as a student in Environmental Studies and Sustainability Science, as well as my opinions and background knowledge, have impacted my research and my analysis. During the content analysis, I decided which video fit in which plot theme; another researcher might have decided differently. My decisions impacted the focus group discussions greatly because I chose the video examples based on that. I am a user of TikTok and immersed in the culture and the jokes; therefore, I might have a different understanding of the videos than non-TikTok users. Furthermore, when it comes to the analysis of the focus group discussions, qualitative analysis is interpretive, and the researcher decides which parts are relevant to the reader (Skjott Linneberg & Korsgaard, 2019). Thus, the coding and analysis will never be completely objective.

#### **4.5 Ethical Considerations**

All focus group discussions for this thesis have been conducted with ethical considerations and the means to protect the participants' privacy. The participants were informed about the research purpose and data collection procedure. Furthermore, all the participants agreed on the recording of the group discussion as well as the storing and further processing of the data for this thesis. To further protect the participants' privacy, all names are kept anonymous.

Due to the nature of focus group discussions, complete anonymity cannot always be granted. The participants were also informed about this issue prior to the discussions. Some groups consisted of people with the same background, which does not always allow internal confidentiality. Internal confidentiality refers to the information displayed to the other participants during a focus group discussion (Sim & Waterfield, 2019). In the case of the focus group discussions where participants might know each other, they were informed about this before agreeing to participate.

Every participant was also informed about the obstacles concerning external confidentiality. External confidentiality goes beyond the anonymity of names and includes the identification of certain participants through the transcripts due to the possibility of linking statements and personality traits to particular individuals (Sim & Waterfield, 2019). The participants were informed that external confidentiality could be difficult to achieve because the researcher might not be aware of certain information in statements during the group discussion that can be linked to the participant's identity



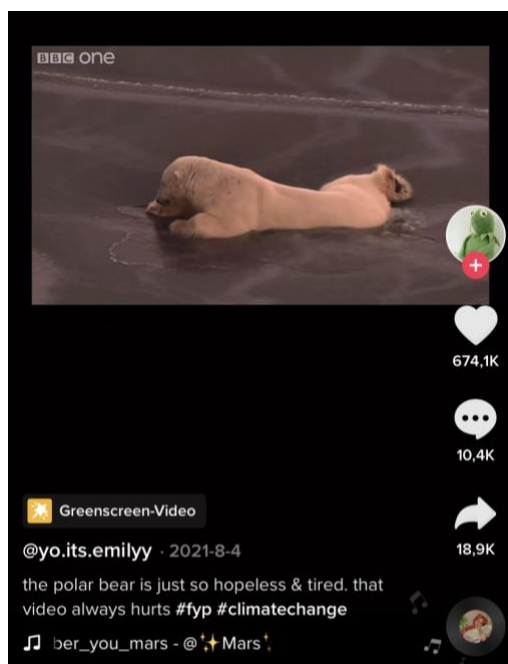
from outsiders (Sim & Waterfield, 2019). The relevant TikTok videos for the content analysis and the focus group discussion are all public videos for everyone to access on the internet; thus, there was no violation of privacy for the content creator.

## 5 Analysis

This section presents the findings of the content analysis, as well as the findings of the focus group discussions. Furthermore, this chapter further explains how the data of the focus group discussions was coded.

### 5.1 Findings of the content analysis

The content analysis shows that almost half of the 100 videos could be considered to be within the plot theme of 'stories of helplessness'. Many viral videos point out a problem or a crisis without showing a solution. The content analyses by Basch et al. (2021) of the 100 most liked videos within the #climatechange in TikTok showed that only a small number of communicators in the videos are scientists or environmental organisations, and a lot of the videos communicate climate change as an anxiety-provoking issue. This is still the case for the videos analysed for this thesis in February 2022. Most of the videos show images of dying polar bears, melting ice caps, burning forests and plastic bags in the ocean. One image shown repeatedly is a video clip by BBC One of a polar bear walking on thin ice and breaking into the water (Figure 4). In the popular TikTok videos, this clip is matched with sad music and text or moderation.



**Figure 4.** Screenshot of a viral TikTok video within the hashtag climate change (Screenshot taken from TikTok on 22.02.2022).

Climate gloom and doom is a trendy style of communicating climate change-related news on TikTok. It seems like the creators of those videos try to raise awareness of specific issues by using emotional images and music. These videos often lack possibilities and actions that could be taken to tackle climate change. The comments on videos categorised as 'stories of helplessness' often show how anxiety-provoking these issues can be for people watching.

After 'story of helplessness', the most common plot of viral TikTok videos is 'story of decline'. These videos show worsening situations surrounding the topic of climate change, but the 'moral of the story' always shows a solution to how a crisis can be averted. Sometimes the solution is unclear and might be something broad like fixing the whole of climate change, but these videos acknowledge that there is a way to turn the situation around and avoid a complete crisis.

Plots with 'stories of rising' and 'stories of control' are not as common as 'stories of helplessness' or 'stories of decline', but they can also be found in viral TikTok videos. 'Stories of rising' usually show positive climate change news or hero stories about activists who broke the world record of plastic picked from the ocean or young engineers inventing new renewable energy technologies. These stories often show a 'moral of the story' about how activism helps and how every individual can make a difference. 'Stories of control' tend to teach the viewers how to engage in activism and take back control of a situation. An example of this is a video about overconsumption that teaches the viewer how to dumpster dive to fight the issue.

Interestingly, one thing that emerged across all the plot themes was the use of humour. A few videos use humour to cope with the situation. They tend to address climate change issues, like the heating of the oceans, and show a nonsense solution, e.g., throwing ice cubes into the ocean to cool it down. Humour and memes within climate change communication are often known to be used as a coping mechanism, but they can also be seen as a distraction from serious matters (Boykoff & Osnes, 2019). Furthermore, humour might be used to break taboos and raise awareness, but it can also trivialise important issues (Kaltenbacher & Drews, 2020).

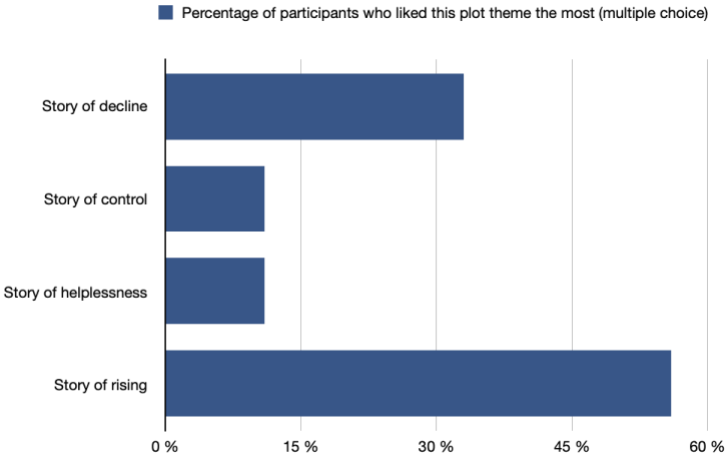
## **5.2 Results of the survey**

Before the focus group discussion started and after the participants watched all the example videos of the four plot themes, each participant filled out a survey to gather data about their initial reaction. To avoid biases, the participants were not aware of the different plot themes. This is why the four themes were referred to as themes 1 to 4 instead of the official names during the discussion (Table 1). The participants answered five questions about each theme after watching the three example videos. After that, they moved on to the next theme and answered the questions there.

**Table 1.** List of the themes and their story counterparts.

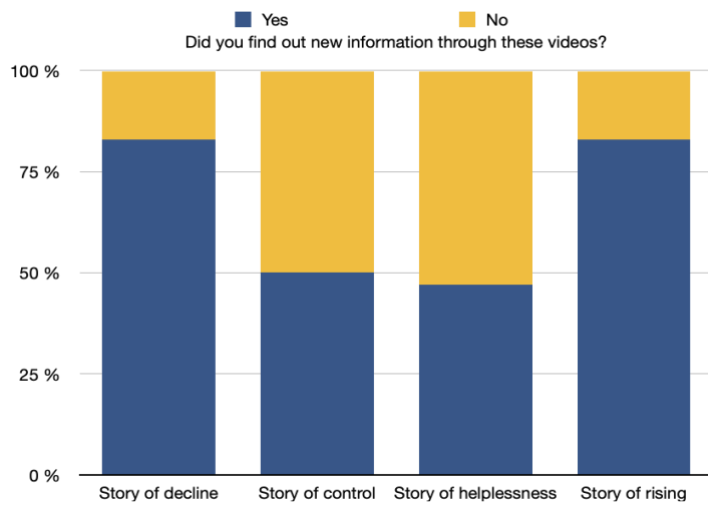
Theme 1	Story of decline
Theme 2	Story of control
Theme 3	Story of helplessness
Theme 4	Story of rising

The results of the survey show that the participants, in general, preferred the videos within theme 4 ('story of rising'); the least participants answered that they preferred theme 2 ('story of control') or 3 ('story of helplessness') (Figure 5). In the discussions, it could be made out that the group of TikTok-users preferred theme 3 and the other groups voiced that they all disliked theme 3 the most. The named reason why the TikTok-user group preferred theme 3 was that the format felt most like a TikTok video because the videos within that theme used popular TikTok trends and were short. Many of the participants of all groups also liked theme 1 ('story of decline') the most. An explanation for this was that this theme felt the most informative to some participants and they did not feel threatened by the story format.



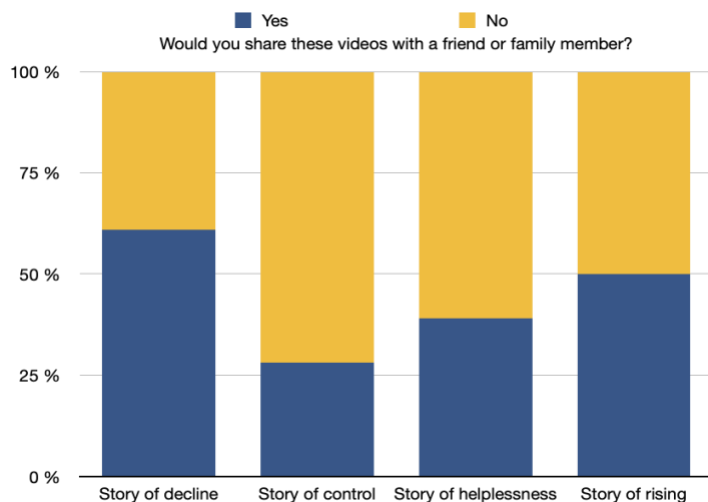
**Figure 5.** Survey results on the most liked plot theme.

The two most liked themes, theme 1 and theme 4, also included new information according to the participants. 83.3% of the participants felt they found new information through the videos for both themes. For theme 2, 50 % of the participants felt like they found new information, and for theme 3, 47.1% felt the same (Figure 6).



**Figure 6.** Survey results on new information within the videos.

When it comes to the shareability of the videos, 61.1% of the participants answered that they would share the videos within theme 1 with a friend or family member. In this category, themes 2 and 3 also had the least percentage of shareability. 38.9% would share theme 3 with their family, while 27.8% would share theme 2 (Figure 7).

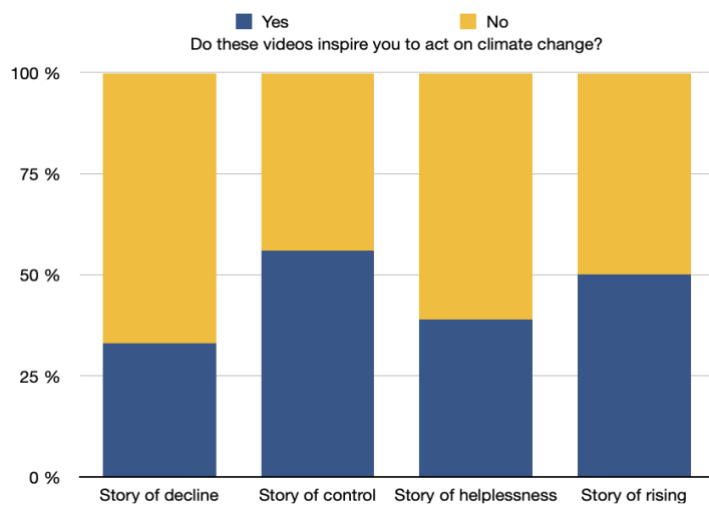


**Figure 7.** Survey results on the shareability of the videos.

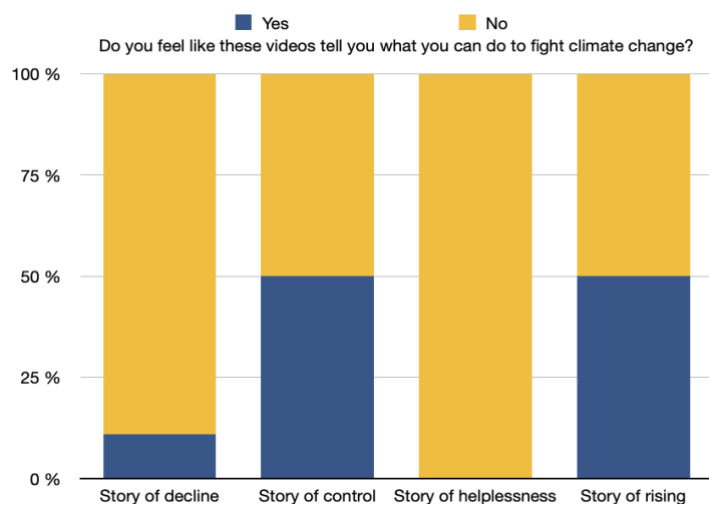
Results for theme 3 also showed that 44.4% felt very negative, and 38.9% felt negative emotions after watching the three videos with stories of helplessness plots. 38.9% of the participants felt inspired to

act on climate change after watching the videos, but none felt like the videos told them what they could do to fight climate change.

While theme 1, 'story of decline', was the second most liked theme because it felt informative to the participants, only 33.3% of the contestants felt inspired to act on climate change due to the videos (Figure 8), and only 11.1% felt like the videos told them what they can do to fight climate change (Figure 9). For theme 2, 'story of control', 55.6% felt inspired to act on climate change, and 50% felt the videos told them what they could do. 72.2% of the participants felt very good or good after watching the videos within theme 4, 'story of rising', and 50% felt inspired by the videos and felt like the videos told them how to act on climate change.



**Figure 8.** Survey results on the videos that inspired the participants to combat climate change.



**Figure 9.** Survey results on the videos that tell the participants how they can fight climate change.

### 5.3 Results of the focus group discussions

As mentioned in the methodology part, the focus group discussion was analysed using an inductive approach. While coding, five higher-level categories were identified, and the codes were subordinated there. The five categories discussed by the participants of the focus group discussions were the four plot types of the videos, the immediate reactions of the viewers to specific videos, the different messages and contents within the videos, the platform TikTok itself as well as the possible action that might be inspired by the videos (Table 2).

**Table 2.** Overview of the codes and main topics identified in the analysis of the focus group discussions

Higher-level category	Description	Codes
Four plot types	Participants talked explicitly about the four plot types	Story of decline, story of control, story of helplessness, story of rising
Reaction	Initial reactions of the participants to the videos	Confusing videos, critical thinking, doubting information, dramatisation, misusing the topic, negative feelings, neutral feelings, positive feelings, representation, research information
Message	Codes about messages within videos	Combination of different stories, easy message, entertainment, moral of the story, positive message, scope of the issue, usage of humour
TikTok	TikTok and how the participants felt about the platform while watching the videos	Benefits of TikTok, typical TikTok, own TikTok-idea, presentation
Possible action	Possible actions that the participants might take due to the videos	Call-to-action, long term impact, new information, shareability, want to know more, remember

Notably, the different participants also had different preferences for the discussed videos. However, overall, the discussions of three of the four groups were very similar. The only group that stood out was the group with TikTok-users. The answers and opinions were somewhat similar; however, the

focus of the discussion was mainly on the platform TikTok itself and whether the videos seemed to be typical for the platform or atypical. The TikTok-user group disliked videos that did not seem like typical TikTok videos to them (e.g., too long, too scientific, not trendy enough) and preferred short and catchy videos even if they connected their first reaction to the videos with negative emotions due to the sad stories and pictures.

#### **Four plot themes:**

Theme 3 ('story of helplessness') was the most discussed plot theme in all four discussions. Looking at the content analysis, this is also the plot theme that is found in most viral TikTok videos within the #climatechange. All four groups connected the videos within this theme with negative emotions and used words like 'annoying', 'pessimistic', 'extreme', 'depressing' and 'stupid' to express their opinion. Some people within the group discussion of TikTok-users also described the videos as 'sad' or 'depressing' but also said that those videos are the most 'appealing' because they tend to be short and 'catchy'. Every participant in the discussion of TikTok-users agreed that this theme felt the most like TikTok to them, but not everyone in the group liked it the most, and some even hated the videos.

Another theme that was discussed a lot was theme 4 ('story of rising'). This was also the most popular theme in the survey. The participants liked the videos of this theme due to their positive atmosphere, and some felt inspired and hopeful after watching the videos. A few participants did not like the videos in this theme because they felt too 'cheesy'. The participants were very indifferent when it came to theme 1 ('story of decline'). Some liked the videos because they felt informative, scientific and clever; others disliked them because they had too much information and felt 'pessimistic' and 'depressing'. Lastly, theme 2 ('story of control') was discussed the least. The participants who enjoyed theme 2 did so because the videos felt professional and had a clear call-to-action.



## **Reactions:**

One of the most common reactions of the participants after watching the videos, regardless of the group, was doubting the information and the intentions of the communicators. Many of the participants were vocal about their mistrust of the videos. They were looking for the sources within the videos but could not find them for the most part. TikTok also does not allow putting links into the video descriptions, and the participants made clear that they would need the sources in the videos to make them more trustworthy. Some videos named sources or books as references for the information mentioned, and many participants took their time after watching the videos to look up and confirm the information.

Nevertheless, some of them clarified that this is something they would not do in a natural setting outside of the discussion. While scrolling on social media daily, they would not fact check every video. It was also mentioned that the mistrust arose due to the absence of scientists or environmental organisations as communicators. Most of the communicators within the videos were young laypeople. It was also mentioned that the platform TikTok itself does not feel like a serious platform, and therefore having videos with serious information felt like a clash to some.

Furthermore, many participants described the videos as overdramatised or performative and suspected that some content creators misused the topic to gain popularity and likes. If the information was presented in a dramatic or over-edited way, it lost credibility to some. Non-TikTok users were also left confused after watching some of the videos because they were unfamiliar with the humour portrayed. It was also criticised that there was a poor representation of different people in the videos, and most of the communicators were white, non-disabled people with American accents.

After watching the videos, the participants had mixed feelings. Many participants felt very negative, especially after watching the videos with 'stories of helplessness'. They used words like 'heavy', 'depressed', 'sad' and even 'manipulated' to describe their feelings. Some also said that they did not feel anything. Mentioned reasons for this were that they were already familiar with the topic or had seen these kinds of images many times before and therefore did not get emotional anymore, or the one-minute format was too short to make them feel emotional. Some also felt positive emotions after watching the 'stories of rising', which gave them inspiration and hope.

**Message:**

When it comes to the discussion about the messages within the videos, it became clear that the participants disliked that most videos talk about climate change without telling the viewer what they can do to help prevent a further crisis.

*“Yeah, I have the same feeling. That is really sad, like I can cry for them, the polar bear and the sea turtles. They are so poor and so sad, but I agree with what SC2 said because they are useless, they are just making you feel sad, but not telling you to do anything. Like, how can we change as ordinary people? We are not governments, we are not a company, we are just ordinary people. How can we change? How can we improve this situation?” (Media & Communication Student).*

Another aspect mentioned when it comes to the message was the scope of the issue. Most of the messages within the videos were about global issues, and the participants felt overwhelmed by that. Participants mentioned that they might care more about the videos if they talked about local issues from their home country. One person also said that TikTok made them feel like they needed to have an opinion about everything, even topics they did not understand or would not care about in real life.

When it comes to positive messages, some participants felt good after watching the videos and even inspired; others felt like the videos were too optimistic and unrealistic. Furthermore, some participants had the same conclusion after watching very negative videos as they had after watching very positive videos, which was that they cannot or do not have to do anything about the issue. Everything is either already taken care of, or it is too late. Most participants, especially in the TikTok-user group, encouraged the use of humour for communicating climate-related issues. A good joke was also able to change people's first impression of a video.

**TikTok:**

From the discussion, it became clear that many participants mistrusted TikTok as a platform, which made them feel unsure about the presented information. Nevertheless, the participants did point out some positive aspects of climate change communication on TikTok. Some mentioned that trends and recurring topics on social media made them feel more important to them. They felt that it was essential to keep climate change within the discourse on social media to get people to care more about it. They also agreed that TikTok is a popular platform, especially with the younger generation and that TikTok has a significant influence on the importance of global issues and current trends. Some suggested that

the climate change discourse on TikTok should also be held by professional communicators who are aware of the benefits and risks of climate change communication on social media.

For most participants, the presentation and the format of the TikTok video were just as important as the message and the plot. They could acknowledge that a video had an important message and a nice story but still disliked it due to 'annoying' voiceovers, commercial communication styles, too much information or loud and irritating background noises, and, in general, too much going on in a short amount of time. Especially the non-TikTok-users disliked the communication style and format of most videos. Often participants also stated that some videos did not feel like typical TikTok videos because they were too long, too professional or too scientific. Some participants also declared that they disliked a video but would like it if it was presented on a different website (e.g., YouTube) in a longer format.

*“And that is more for me something that you can have on YouTube as a longer format, that’s like maybe 10 Minutes video or so, but for TikTok it was too much. And also, in a too scientific way, I would say. It didn’t approach me, in an emotional way” (Media & Communication Student).*

#### **Potential for action:**

Lastly, the participants talked about the possible encouragement for potential action these videos can have on them. Many participants mentioned that they found new information through some of the videos. Even though the trust in the platform and the communicators was reportedly low, it was still perceived as a positive impact for most. Some reported that new information made them want to know more about the topic and that it helped to plant a seed in their head. Furthermore, one participant mentioned that one TikTok video would probably not have a significant impact, but several ones about the same issue would make the topic seem important. Next to humour and spreading positive news, new information and presented facts were also mentioned as a reason to share TikTok content with friends and family.

*“I’m thinking of myself, maybe sharing good videos that I perceive as good content of presentation of facts that I could share with my family and friends. And have that kind of grassroots movement” (Environmental Student).*

Some participants claimed that the videos would probably not impact them because they were already aware of the issue. Furthermore, some said that the videos had a short-term impact on them, but they were unsure if this would last. An example of this is that many reported feeling emotional after

watching several videos. However, they were unsure if this emotion would last longer or if that feeling and the concern would go away after watching funny videos about other topics on TikTok.

*“While watching these videos, I was instantly thinking that I need to change some of my habits, and I need to go completely vegan and this and that. I usually have these feelings, when I’m watching videos like those or watching documentaries. I do change some things in my life usually, but not completely all at once after watching them. So, I think for me to really be influenced by those kinds of videos, I really need to watch them on a regular basis. They would really need to appear on my ‘For-You’-page often, so I get reminded constantly. Of course, we are all aware of climate change and global warming and that it is a bad thing, but I think I might need some reminders now and then to really change something and be influenced constantly by those kinds of videos” (Media & Communication Student).*

Some videos contained a call-to-action in the end in terms of asking to sign a petition or donating money to an organisation or charity. All of the participants stated that they would not donate money to a charity presented on TikTok; one participant made the exemption that they might consider donating if a trusted environmental organisation made the video. Some claimed they might sign a petition, but most said they would not sign it or only sign it after researching more information. It was suggested that the call-to-action does not have to be a petition or a donation but rather a suggestion of a behaviour change. Multiple participants mentioned that they would rather see examples they as individuals could implement to have a more sustainable lifestyle rather than having to sign a petition or donate to a charity. Some even disliked the idea of any call-to-action.

*“TikTok is where I find what people are thinking and talking about, but call-to-action, either a positive one or a negative one, doesn’t come from there. It would have to be from a person that I recognise, someone that I trust and something, honestly, that is trending right now. If it’s cool to help right now? Awesome, then let me help. Let me click. But TikTok is so fast that leaving TikTok is barely an option, you know? Something that makes you click away? No, of course not. I’m just watching TikTok. I don’t want to be clicking and thinking. So yeah, I think it is more of that” (TikTok-User).*

Besides learning new information and keeping the topic within discourse, some other potential actions mentioned were getting inspired by some of the videos, talking with friends and family about them and keeping the information in mind. Some people felt inspired after watching some of the videos and said they would probably think about the information later. On the other hand, some participants reported that they felt really sad after watching some of the videos and that it might even lead to them feeling more negative and helpless about climate change than before, which would have a negative

effect on their willingness for action. Positive stories made some participants feel like the issue (climate change) was already taken care of, which meant they did not have to get involved. In contrast, the negative stories made them feel so helpless that they felt like it would change nothing about the situation even if they got involved.

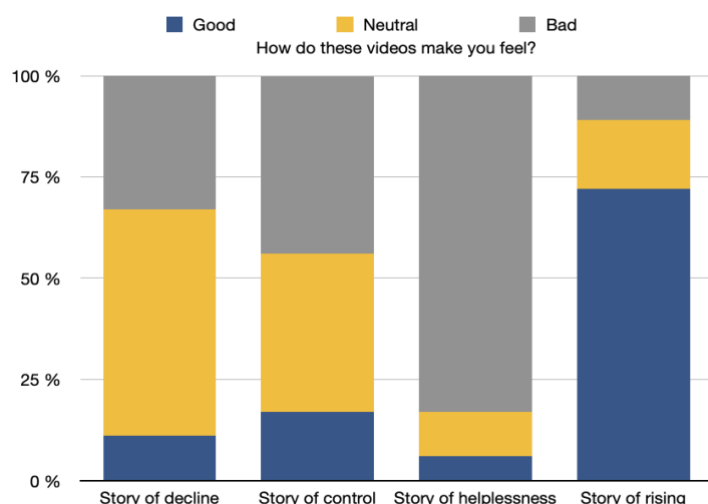
## 6 Discussion

This chapter will discuss the results of the focus group discussions and answer the research question of this thesis, how viral videos impact people concerning emotions, shareability and action. To answer this, three sub-questions were formulated and will be discussed in the following chapter. First, this chapter will discuss how viral TikTok videos impact people's emotions. Secondly, the shareability of the different plot themes is being discussed. Then, this chapter will address what kind of content inspires people to act on climate change. Lastly, this chapter will connect the findings to the NPF.

### 6.1 How do viral TikTok videos about climate change impact people's emotions?

The results of this thesis highlight the negative and helpless feelings that people feel due to the plot theme 'story of helplessness'. As the pre-study for this thesis showed, most of the viral videos on TikTok about climate change used 'stories of helplessness' to communicate their messages. This type of communication is also often referred to as 'doom and gloom' and is used to raise awareness of specific issues. When it comes to climate change, this type of message can discourage people from acting on the problem (Schweizer et al., 2009). Messages that use 'doom and gloom' as their communication style often lack hope, which is an essential factor in young people's lives to pursue goals and take action. Without hope, action seems to have no purpose (Bishop & Willis, 2014). This entails that negative emotions due to videos on TikTok can have a negative impact on the viewer and their engagement with climate change issues.

The TikTok videos shown in the discussion were able to influence the participants' moods positively and negatively, depending on the used plot theme. Notably, most participants felt negative emotions after watching videos with the plot theme 'story of helplessness' and positive emotions after watching videos with the 'story of rising' plot theme (Figure 10). Nevertheless, it is important to note that the plot theme 'story of helplessness' is significantly more represented on TikTok than the plot theme 'story of rising'. This suggests that most viral TikTok videos about climate change have a negative impact on peoples' emotions.



**Figure 10.** Survey results on how the videos made the participants feel.

Furthermore, this type of communication can show how the content creators feel about climate change and their future (Otto, 2017). I find this significant because most content creators on TikTok are young laypeople. Looking at the emotional and helpless plots used to communicate might reveal the overall feeling of that generation towards climate change and what kind of challenges may arise due to this. Participants of the discussions noted that negative emotions might hinder them from engaging with climate-related issues.

Young people are an essential group that will have to deal with climate change and its consequences in the future. Thus, they are an important stakeholder in sustainability science, and their negative emotions should be taken seriously. Communicating about climate change online might be a coping mechanism to deal with negative emotions. Studies show that the younger generations are often more aware of global issues like climate change but do not necessarily have a more sustainable lifestyle than older generations (Ojala & Bengtsson, 2018). In a broader sustainability context, this might give insights into the impact of communication on sustainability issues. Negative messages should be avoided to not make people feel like all hope is lost and their contribution does not mean anything.

These findings also comply with existing research. Communicating problem- and solution-focused messages is more effective than emotion-focused in achieving pro-environmental behaviour (Homburg et al., 2007). Furthermore, sharing fear-induced messages is only effective if it is expressed in a solution-oriented way (Howell, 2012). The participants of this study felt more positive emotions while watching the plot themes that communicate in a solution-oriented way than with the other two plot themes. 'Story of rising'-videos that showed people who actively combated climate change or talked about positive news were the preferred communication style for most participants.

Furthermore, when it comes to TikTok, humour is often used to communicate climate change-related issues. This might be due to the nature of TikTok as a platform or because humour positively affects people's emotions. Interestingly, especially the TikTok-user group needed humour within the videos to be interested in a topic. The TikTok-user mainly used TikTok for entertainment purposes, and therefore humour would be an essential factor. However, the discussion also showed that humour is subjective, and non-TikTok users do not easily understand TikTok humour. Internet humour combines different subcultures, and most of the time, background knowledge of these subcultures is needed to understand the joke (Lin et al., 2014). Not understanding the humour made participants dislike the video. This should be kept in mind because TikTok videos are easily shareable and could end up on different websites, which can cause misunderstandings.

## **6.2 What makes people want to share viral TikTok videos with friends and family?**

The survey results show that the participants would share videos with the plot themes 'story of decline' and 'story of rising' with their family members rather than 'story of helplessness' or 'story of control'. Interestingly, the plot themes 'story of decline' was most likely to be shared with friends and family, with 61.1% of the participants saying they would do so. 'Story of decline' was neither the favourite plot theme for most participants, nor did many of them have positive emotions while watching the videos.

It is interesting to point out that there was a discrepancy between the perceived credibility of the platform and the willingness to share content. Even though the credibility of information on TikTok was perceived as low, the participants enjoyed videos that presented new information to them. Factual and informative videos were more likely to be shared with friends or family. The participants reported that they would keep new information in mind. It made them want to know more about specific topics. Spreading information from TikTok was seen as a way to get friends and family interested in the topic. This suggests that TikToks could have a grassroots effect and might be an important tool in spreading information, even though its credibility is low.

Additionally, participants mentioned they would most likely share funny content. Some stated that trends and recurring topics on TikTok influenced the importance they put on a topic. This would mean that frequent climate change communication on TikTok might make the issue feel more important to some users.



### **6.3 What kind of content inspires people to act on climate change?**

Especially the two plot themes, 'story of helplessness' and 'story of decline', failed to communicate knowledge on how to combat climate change as an individual to the participants. The reason for this might be the missing call-to-action in the 'moral of the story' of these videos. When it comes to the other two plot themes, 'story of rising' and 'story of control', half of the participants felt like the message communicated knowledge on what to do.

Regarding the question of which videos inspired the participants to act on climate change, the answers 'story of control' and 'story of rising' were also picked the most. Nevertheless, although most participants agreed that the other two plot themes did not tell them what they could do to combat climate change, some participants still felt inspired by them.

Another important finding is that scale in climate change communication matters when inspiring people to combat climate change. Many participants felt overwhelmed with global issues, and they felt like they could not act on them as individuals. Sharing about local issues concerning climate change makes it more relevant to the receiver of the message, and it is also easier to act on local issues (Spence et al., 2011). It is still important to communicate globally so that people understand how a local action might have a global impact. However, when it comes to a call-to-action, it is better to communicate locally (Spence et al., 2011). This, however, contradicts the nature of TikTok. The app itself is global and used around the world. Content only goes viral if relevant to many people, which is mainly not the case for local issues. Furthermore, TikTok content relies heavily on the TikTok algorithm. Local content will only appear on the 'For-You' page if the app connects the user with the area (e.g., local sim card).

Interestingly, the participants needed a call-to-action but preferred tips for a sustainable lifestyle over petitions and donations. Furthermore, the discussion showed that people do not want to leave TikTok or stop scrolling. TikTok is fast-paced, and people seem to be stuck on one page without wanting to leave. This is important to acknowledge when it comes to potential call-to-actions in the videos. A call-to-action for a future behavioural change that could be implemented after using TikTok was perceived as more favourable than an immediate call-to-action that would have required leaving the app.

Additionally, it should be noted that science communication and TikTok seemed like a clash to some participants. Very scientific videos with high production were perceived negatively by some. It was mentioned that some would prefer these types of videos on other platforms (e.g., YouTube) but not on TikTok. Especially the TikTok-user group disliked videos that did not feel like typical TikTok videos to them. This is important because it shows that climate change communication can be informative,

positive, well-made, and still be perceived negatively if it does not feel like a typical TikTok video. This might also be why laypeople and not scientists create most viral videos.

The other three groups put less importance on the typical TikTok-feel in the videos and were more open to scientific communication on TikTok. Overall, the four groups did not differ significantly in their discussions. The only group that differed slightly was the TikTok-user group. They were inspired more by trendy and funny content than by the different plot themes. Furthermore, they mentioned mainly short-term impacts after watching the videos. They felt negative emotions after negative videos, but they also talked about watching funny videos to compensate for the negative emotions. In the future, it would be interesting to study this group further.

#### **6.4 Reflections on the NPF**

The NPF on the micro-level is especially interested in the impact narratives have on individuals' opinions (Jones & McBeth, 2010). This is because public opinions can influence public policy (Jones & McBeth, 2010). The group discussions for this thesis did not research people's opinions on climate change. Instead, this study should be seen as an insight into how different communications can impact people's emotions and actions. It was shown that the different narrative elements within the NPF impacted how the participants perceived the message. In general, the results showed that the 'plot' of a story was important for the enjoyability of the viewer, but the 'moral of the story' was necessary to inspire possible action. Different plot themes have different impacts on how people view climate change and whether they want to share the content, but the 'moral of the story' can impact people's views on climate change and inspire potential actions. For future research, it might be interesting to find out why 'story of helplessness' is the most represented plot theme in viral TikTok videos about climate change.

## 7 Conclusion and Reflection

Nowadays, climate change communication is diverse due to the multiple possibilities of online communication. Audiovisual social media apps have grown in popularity in the last few years and present opportunities for everyone to participate in the climate change discourse. This means that the communication on these platforms is no longer dominated by scientists but instead involves everyone in society. An example of this is the social media app TikTok, one of the most successful apps in recent years (Iqbal, 2022). Research has shown that climate change communication is happening on TikTok, and laypeople mainly dominate the discourse (Basch et al., 2021). Furthermore, the nature of communication on TikTok encourages the usage of narratives and emotions.

This thesis shows that doom and gloom narratives are popular in climate change communication on TikTok. This type of communication can harm hope and pro-environmental behaviour. Furthermore, the lack of a clear 'moral of the story' in many videos is to be noted. Nonetheless, not all videos use helpless stories or lack call-to-action. The group discussions show that many participants preferred positive storylines over negative ones and actively asked for a call-to-action in the videos. They preferred call-to-actions with inspiration to live a more sustainable lifestyle over petitions or donations.

The chosen videos' impact on the participants ranged from impacting their emotions and willingness to share the content with others to being inspired by the videos. Some participants also stated that they did not feel like the videos impacted them greatly because they were either already aware of the issue or the videos made them feel too negative or too positive, which both would result in not being able to engage with the matter. It is also interesting to note that all of the participants mistrusted information on TikTok and had a cautious mindset when it came to receiving scientific information on TikTok.

For further research, it would be beneficial to conduct this study with participants younger than 18 and, therefore, a significant user group on TikTok. Furthermore, it would also be interesting to use the plot themes with different videos to test if the results would be similar. This is also necessary to be able to make factual claims.

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# 9 Appendices

## 9.1 Appendix A: Survey

### TikTok and Climate Change Communication

Section 1

1. How do these videos make you feel?

Mark only one oval.

	1	2	3	4	5	
Very good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very bad

2. Would you share these videos with a friend or family member?

Mark only one oval.

Yes  
 No

3. Did you find out new information through these videos?

Mark only one oval.

Yes  
 No

4. Do these videos inspire you to act on climate change?

Mark only one oval.

- Yes
- No

5. Do you feel like these videos tell you what you can do to fight climate change?

Mark only one oval.

- Yes
- No

**Section 2**

6. How do these videos make you feel?

Mark only one oval.

	1	2	3	4	5	
Very good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very bad

7. Would you share these videos with a friend or family member?

Mark only one oval.

- Yes
- No

8. Did you find out new information through these videos?

Mark only one oval.

- Yes
- No

9. Do these videos inspire you to act on climate change?

Mark only one oval.

- Yes
- No

10. Do you feel like these videos tell you what you can do to fight climate change?

Mark only one oval.

- Yes
- No

**Section 3**

11. How do these videos make you feel?

Mark only one oval.

	1	2	3	4	5	
Very good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very bad

12. Would you share these videos with a friend or family member?

Mark only one oval.

- Yes
- No

13. Did you find out new information through these videos?

Mark only one oval.

- Yes
- No

14. Do these videos inspire you to act on climate change?

Mark only one oval.

- Yes
- No

15. Do you feel like these videos tell you what you can do to fight climate change?

Mark only one oval.

- Yes
- No

Section 4

16. How do these videos make you feel?

Mark only one oval.

	1	2	3	4	5	
Very good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very bad

17. Would you share these videos with a friend or family member?

Mark only one oval.

- Yes
- No

18. Did you find out new information through these videos?

Mark only one oval.

- Yes
- No

19. Do these videos inspire you to act on climate change?

Mark only one oval.

- Yes
- No

20. Do you feel like these videos tell you what you can do to fight climate change?

*Mark only one oval.*

Yes

No

21. Which videos did you like the most? (you can check one or more)

*Check all that apply.*

Section 1

Section 2

Section 3

Section 4

## 9.2 Appendix B: Semi-structured questions for the focus group discussion

Start: Thank you for taking part! Explaining the course of the discussion, talking about anonymity, send the survey link, explain the survey, send the videos, start the discussion.

1. Which TikTok theme was most noticeable for you? (Can be in a positive or negative way)
2. How do you feel these videos impact you?
3. What would you do if you would come across these videos on the internet? (Call-to-action?)
4. Theme 3 is the most popular on TikTok, do you have an explanation as to why that would be the case?
5. Positive and negative aspects of communicating climate change on TikTok?
6. Bonus: In your opinion, did these videos do a good job in communicating climate change? Why or why not?
7. Bonus: If you would have to create a TikTok video about climate change, what would that look like?

### 9.3 Appendix C: TikTok videos

Theme 1 - Story of decline

<https://www.tiktok.com/@hashem.alghaili/video/6894553957725703425>

<https://www.tiktok.com/@alexengelberg/video/6994676579125267717>

<https://www.tiktok.com/@elliebotoman/video/6982229190867291397>

Theme 2 - Story of control

<https://www.tiktok.com/@action4climate/video/6922210978708884741>

<https://www.tiktok.com/@tennessee/video/6988871763698502917>

<https://www.tiktok.com/@nasdaily/video/6990374460251458818>

Theme 3 - Story of helplessness

<https://www.tiktok.com/@yo.its.emilly/video/6992539772338081030>

<https://www.tiktok.com/@willow.sky/video/6763116973929876741>

<https://www.tiktok.com/@cirruslyesterday/video/7031706110994222382>

Theme 4 - Story of rising

<https://www.tiktok.com/@tarabellerose/video/6993574757450927362>

<https://www.tiktok.com/@thegarbagequeen/video/6986733857810681094>

<https://www.tiktok.com/@luisanglcordova/video/6847870625541803270>