Communicating the Crisis

Content

This work is based on my (the author's) eurocentric view. Most studies cited in this thesis relate to western culture and focus mostly on european and north american countries (especially the US, the UK and Germany) as well as Australia.

Statements made here might not hold true for other cultures and are not to be taken as a global norm.

Introduction

Hello. I am glad you are here. Before you start reading this paper, I would like to introduce you to a few thoughts of mine behind this piece of work and give you a little introduction into how this theoretical part of my thesis is structured.
The first and most important aspect that I would like to mention is that through writing this paper I am aiming connect three different perspectives of mine while adressing the issue of climate change. One of those perspectives would be the scientifc and analytical side. All black text that you are reading is based on different scientific sources and papers by mainly sociologists and psychologists. Those sources will be numbered and you can find all references at the end of this paper. A second perspective provides my personal thoughts and reflections on the different topics I am going to touch. Those thoughts will be written in blue letters and you can find most of this input on your right or your left hand side in a smaller column on each page. I feel the need to include those thoughts, not only because I like to give my opinion but also to come to terms with my own emotions and doubts, my fear and my anger around the topic of climate change and to hopefully encourage you to do the same. We will find out later why this might be of importance. Thirdly I would like to bring an activist perspective into this, since climate change is a topic that requires action and mobilization. Any aspects or comments that relate to an activist background, will be marked in red.

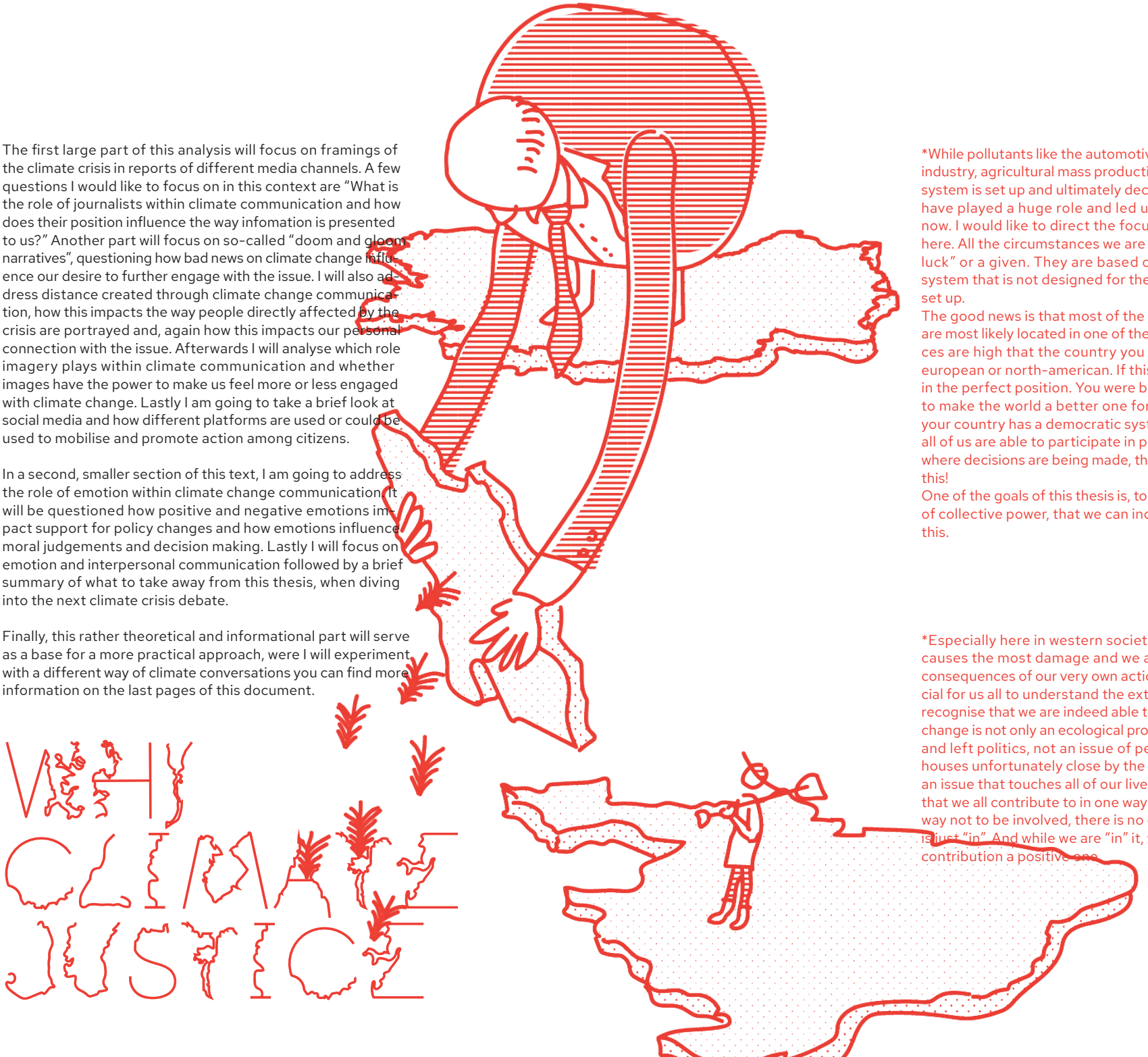
A second point I would liket to mention is the general goal of this thesis. This will not be a place where the weight of the climate crisis will be put on the shoulders of consumers. While I and most references I use recognize that there is a certain impact of individual action when tackling the issue of climate change, I would like to stress here that the problem is much bigger than recycling habits or how long an individual person likes to shower for.
Another goal is to shed some light on communication of the climate crisis. I believe in order to understand what climate change means is regarding you and me and us as a collective, it helps to understand the way we learn and talk about climate change. The way we communicate about a topic plays an important role in our decision making and can possibly influence a more eco-friendly way of life.
Finally I would like to give you a little heads up for what is about to come. Firstly I am going to introduce a concept called "Global Warming's Five Germanys" [0]. This concept gives an insight into Germans' general stands on the climate crisis and, an in my opinion especially interesting aspect, which media channels they prefe to use in order to gain information on the climate crisis.

The fact that governments and big polluting industries (like Shell, for example) still feel like they can delegate all responsibility for solving the climate crisis towards the civil societies, telling them to take 5 minute showers, to change their lightbulbs and we will be ok, makes me admittedly quite angry.*
*read about this anger on the next page

The first large part of this analysis will focus on framings of the climate crisis in reports of different media channels. A few questions I would like to focus on in this context are “What is the role of journalists within climate communication and how does their position influence the way infomation is presented to us?” Another part will focus on so-called “doom and gloom narratives”, questioning how bad news on climate change influence our desire to further engage with the issue. I will also address distance created through climate change communication, how this impacts the way people directly affected by the crisis are portrayed and, again how this impacts our personal connection with the issue. Afterwards I will analyse which role imagery plays within climate communication and whether images have the power to make us feel more or less engaged with climate change. Lastly I am going to take a brief look at social media and how different platforms are used or could be used to mobilise and promote action among citizens.

In a second, smaller section of this text, I am going to address the role of emotion within climate change communication. It will be questioned how positive and negative emotions impact support for policy changes and how emotions influence moral judgements and decision making. Lastly I will focus on emotion and interpersonal communication followed by a brief summary of what to take away from this thesis, when diving into the next climate crisis debate.

Finally, this rather theoretical and informational part will serve as a base for a more practical approach, were I will experiment with a different way of climate conversations you can find more information on the last pages of this document.



*While pollutants like the automotive industry, the fossil fuel industry, agricultural mass production, the way our economic system is set up and ultimately decisions made by politicians have played a huge role and led us into the crisis we are in now. I would like to direct the focus to the word “decisions” here. All the circumstances we are in right now are not “bad luck” or a given. They are based on decisions, that form a system that is not designed for the way our ecosystems are set up.
The good news is that most of the people who will read this, are most likely located in one of the Industrial Nations. Chances are high that the country you find yourself in is either european or north-american. If this is the case then you are in the perfect position. You were born just in the right place to make the world a better one for all of us. Why? Because your country has a democratic system. This means, you, me, all of us are able to participate in politics. Politics, the place where decisions are being made, that can maneuver us out of this!
One of the goals of this thesis is, to hopefully create a feeling of collective power, that we can indeed make our way out of this.

*Especially here in western societies, where our way of life causes the most damage and we are least affected by the consequences of our very own actions, communication is crucial for us all to understand the extends of the problem and recognise that we are indeed able to turn this around. Climate change is not only an ecological problem, not a topic of green and left politics, not an issue of people who have built their houses unfortunately close by the coasts. Climate change is an issue that touches all of our lives, that we play our part in, that we all contribute to in one way or another. And there is no way not to be involved, there is no choice, no in or out, there is just “in”. And while we are “in” it, we might as well make our contribution a positive one.

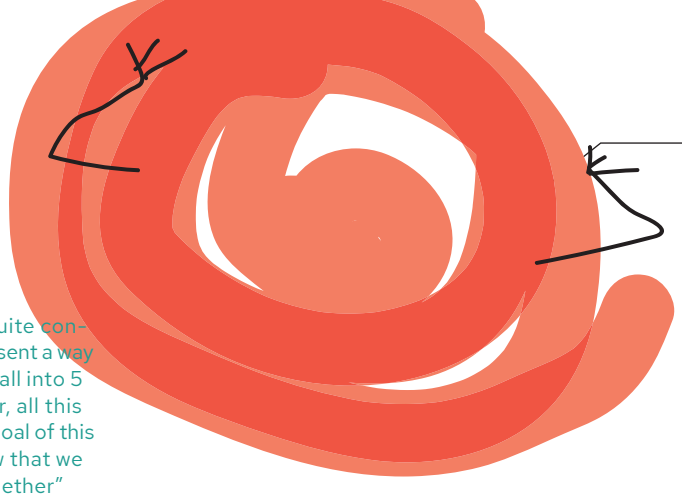
Global Warmings Five Germanys

The concept of "Global Warming's Five Germanys" [0] is an analysis on how Germans view climate change and in which way they use media to learn about the issue. It is based on a study by Julia Metag, Tobias Füchslin and Mike S. Schäfer, in which they analyse people's reactions towards the climate crisis and how those reactions influence their voting behaviour and communication. By doing so Metag, Füchslin and Schäfer managed to group people's reactions into 5 main categories. Since those views are not something we are born with but have been built up, strengthend or altered by communication and the information provided to us (mostly through media), the study also explores the link between people's opinion on climate change and the different ways they like to gather information on climate change.

A similar study has been completed before in the United States, distinguishing 6 Americas. The study then has been extended to Australia and India. Whether such a segmentation exists in other countries apart from the ones mentioned is unclear. Germany differs in a way from this typology because the "level of climate change scepticism is much lower than in the United States".

In the US six different types were distinguished (the Alarmed, the Concerned, the Cautious, the Disengaged, the Doubtful and the Dismissive), the largest groups being the Concerned (31%) and the Cautious (23%). Interestingly enough the Disengaged only made up 7% of the population.

To be able to characterise different types of views towards climate change in Germany, Metag, Füchslin and Schäfer took a look at the following aspects: the concern of participants about climate change, their beliefs and personal perceived issue involvement (meaning a person's certainty or doubt and whether they feel like climate change poses a direct threat to their lives) as well as their knowledge on climate change. Climate change related behavior (measured as behavioral intentions or actual behavior) and policy preferences also played an important role. Furthermore overarching values and socio demographics were considered, including general environmental awareness, values (e.g. freedom, equality, security, alturism and hedonism), subjective norms and socio-demographics (education, income, sex, age, household size). The usage of media was determined by considering mass media use, perceived quality of media outlets and interpersonal communication. The information regarding all of those topics was gathered through an extensive questonnair. By clustering the different pieces of information five "types" of Germans emerged.

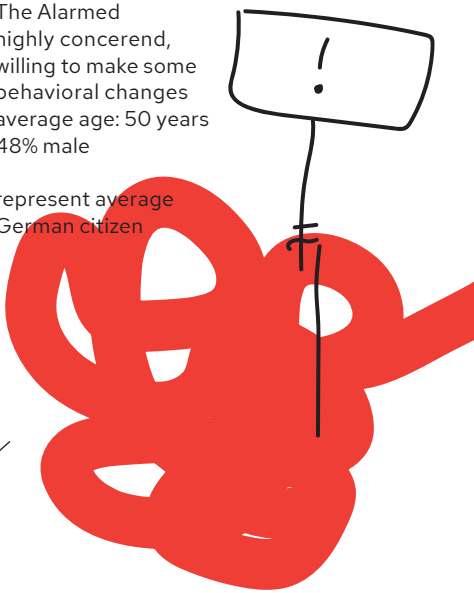


It does sound quite contradictory to present a way that devides us all into 5 categories after, all this talk about "the goal of this thesis is to show that we are all in this together"

Mapping out the knowledge and opinions of people around the climate crisis can help communicate in a more effective way, meeting people where they are and understanding what type of information may be relevant for them in order to take action on climate change.

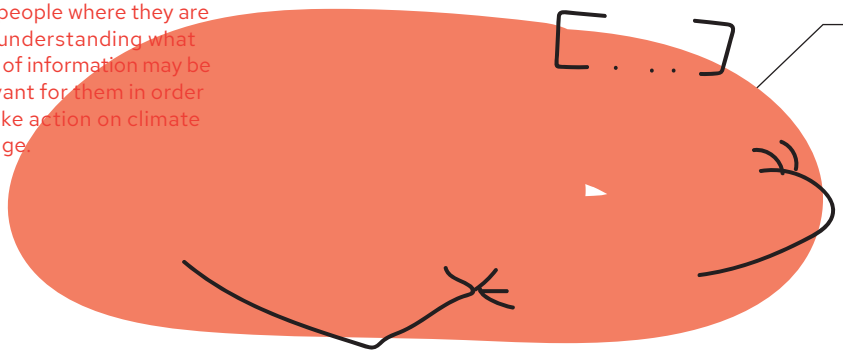
The Alarmed
highly concerend,
willing to make some
behavioral changes
average age: 50 years
48% male

represent average
German citizen



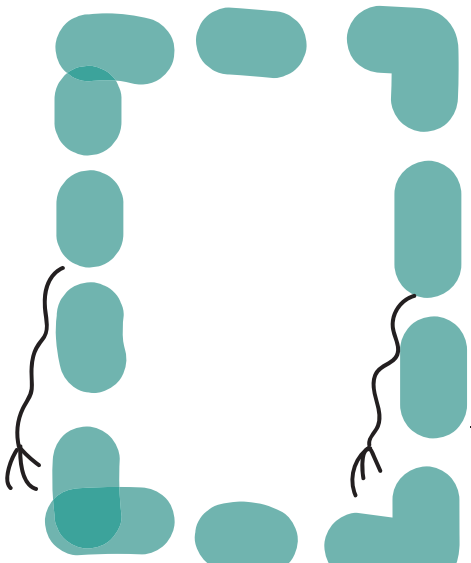
The Concerned Activist
shows above average
concern and activism
average age: 48 years
54% male

highest average income
among all clusters



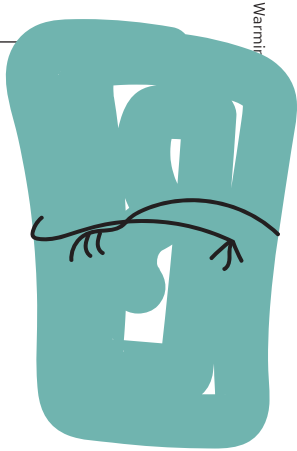
The Cautious
concerned about climate
change but do not actively
search for more information
average age: 50 years
55% female

71.5% have at least one child



The Doubtful (10%)
skeptical about climate
change, yet concerend
about the environment
average age: 48 years
66% male

majority works a full-time job
has one or more children



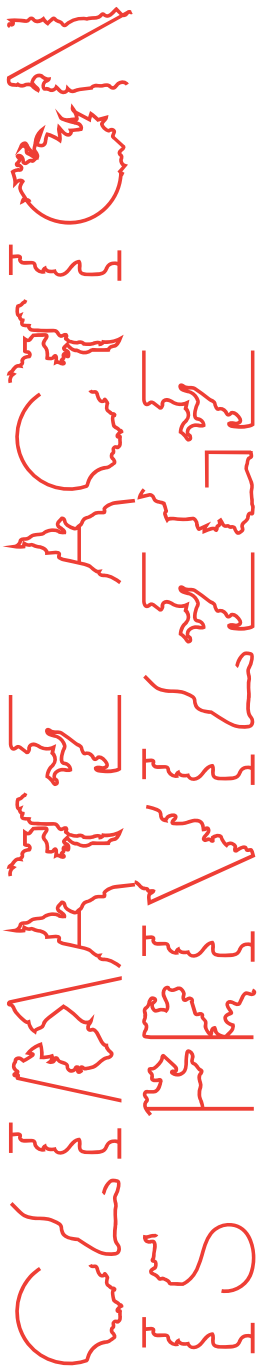
The Disengaged (20%)
least worries about the
climate crisis
average age: 53 years
52% female

53.9% unemployed

1. The Alarmed, they are the most concerened about climate change and make up the second largest section (24% of respondents were grouped into the "Alarmed" category)
2. The Concerned Activst (18%), are quite concerend about climate change, but not as much as the alarmed, they tend to translate their concern into action, they value environmentally friendly attitudes and are the ones who lead the most eco-friendly lives.
3. The Cautious, they form the largest group of all categories with 28% of all participants. The Cautious appear to be concerend with the climate crisis but this concern is not mirrored in their everyday lives, they drive cars, travel long distances by plane and do not use eco-power. They are willing to get politically involved though. This discrepancy can be explained through their "conservative ecological values". This means that they are worried about climate change but tend to care not as much about the environment and for example do not strongly agree with statements like "the earth's resources are limited" or "we are living at the expense of future generations".
4. The Disengaged (20%) seem to be least worried about climate change, they use neither eco power, nor are they politi cally active, they also tend to not own a car or take long plane journeys.
5. The Doubtful make up the smallest segment of all five segments (10%). They are sceptical that climate change exists or that it is human caused, this mirrors in their behavior. This group of people tend to be conservative, yet interestingly enough still believes that the earth's resources are limited and that we are living at the expense of future generations.

Among all media channels, TV was found to be the most used reliable source of information on climate change for all groups, followed by Social Media and newspapers. The Alarmed and the Concerened Activists are the two groups who talk to friends and family most about the climate crisis, but still, also for them conversation with friends and family is one of the least used sources to gather information. While the Disengaged and the Doubtful barely seek information on climate change at all.

The demographics of the different groups are also an interesting aspect to consider because they differ greatly from segment to segment.
The average age of the Alarmed is 50 and represents the common German citizen, concerned about climate change and eager to learn more. They search for information more frequently than all other groups and are willing to change their behavior. The Concerened Activist is on average 48 years old and forms the youngest cluster among the five groups with quite a high employment rate and a rather high income. The Cautious consist of more men (55%) than women and are 50 years old on average, most of them have children. They engage with climate change information only moderately which is represented in their behavior. The Disengaged have the smallest household sizes, low education level and over half of them are unemployed. The average age is 53, so a lot older than the 3 groups mentioned before. 66% of the group of the Doubtful are men, who work full time with high income, most of them have children. As mentioned before, they do not believe in climate change, but care about the environment.



I find those pieces of information especially interesting because they are a quite piercing example of how having the chance, the adequat education level, and the financial stability to get involved into the climate change issue this is indeed quite a privileged position and something to be discussed and adressed within climate change movements. The reason why I am able to spend time writing about this issue is because I am incredibly privleged to have access to education that enables me to learn about topics I care about. I am lucky to have a job and to be financially independent enough to spend the free time I have on activism.

Closing this topic I would like to stress again that the goal of this study is not to shame people for being "disengaged" or to call someone an "alarmist" because they care about climate change, it rather serves to better understand where people come from and why they engage (or why they do not engage) with the climate crisis in the same way others do. Of couse this data can never accurately represent the way every single German thinks about climate change, and since this research has taken place in 2015 percentages, averages and attitudes may have shifted by now. But this might help in understanding why people have different views on climate change. It might show as well that being very active in battleing the climate crisis does not make one person better than another. It might just mean that they are exposed to the issue in quite distinct circumstances, making it easier for one and harder for the other to engage with the issue.

For communicators trying to understand how to best communicate climate change this indicates different ways of communication that could work for the different groups and can help us think about more fruitful strategies. After all we are still all in this together, there might be different ways to intervene for each and every one of us depending on our social status, our values, our possibilities, our world views and our political opinions, but we still work towards the same goal:
The role of media in times of climate crisis.

At this point in time most Germans agree that the climate crisis is quite a pressing and prominent issue. Apart from that it is also a very complex one. Our actions and decisions here, today, do not only affect the present, but also (and especially) the future. The consequences of our actions do not only rest on our shoulders but will especially affect the most vulnerable communities on our planet. The climate crisis is not solely an ecological issue. It expands well into our economic and societal systems and is directly connected to policy making. Another trait of this issue is that climate change does not effect each state individually, but manifests itself on a global level.
The concept of "wicked problems", coined in 1973 by Horst Rittel and Melvin Webber, explains quite accurately why the climate crisis is such a difficult issue to address.

Wicked Problems

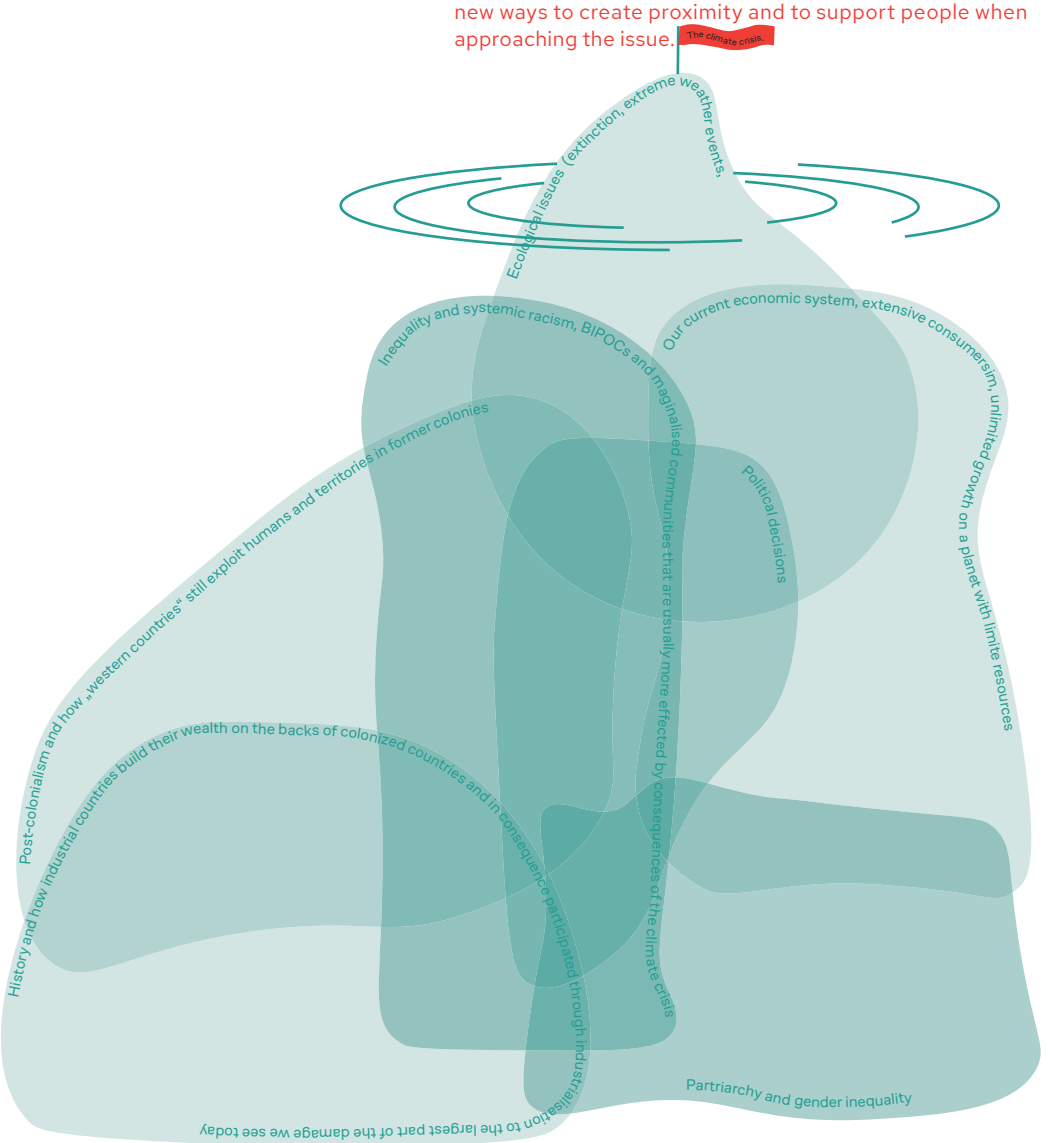
The term "wicked problem" is used to describe "intracable issues". Such issues are complex, with many different sides to them and with no possibility to solve them following distinct steps. Climate change has often been defined as the ultimate "wicked problem" since it touches not only the ecological sector but also the economical sector. Apart from that it is extremely politcal, implies and amplifies social injustices and human rights issues, and covers many more facets. All those aspects can be addressed in a different way and are focussed on by different entities (for example the media). This explains why it is possible to frame the issue of climate change in many different ways, while not being able to solve it. Rittel and Webber suggest that a "wicked (complex) problem" must not be treated as a simple problem. This means that identifying a cause before acting accordingly is crucial to solving the issue. They claim that one must understand the context of a "wicked problem" to be able to solve it.

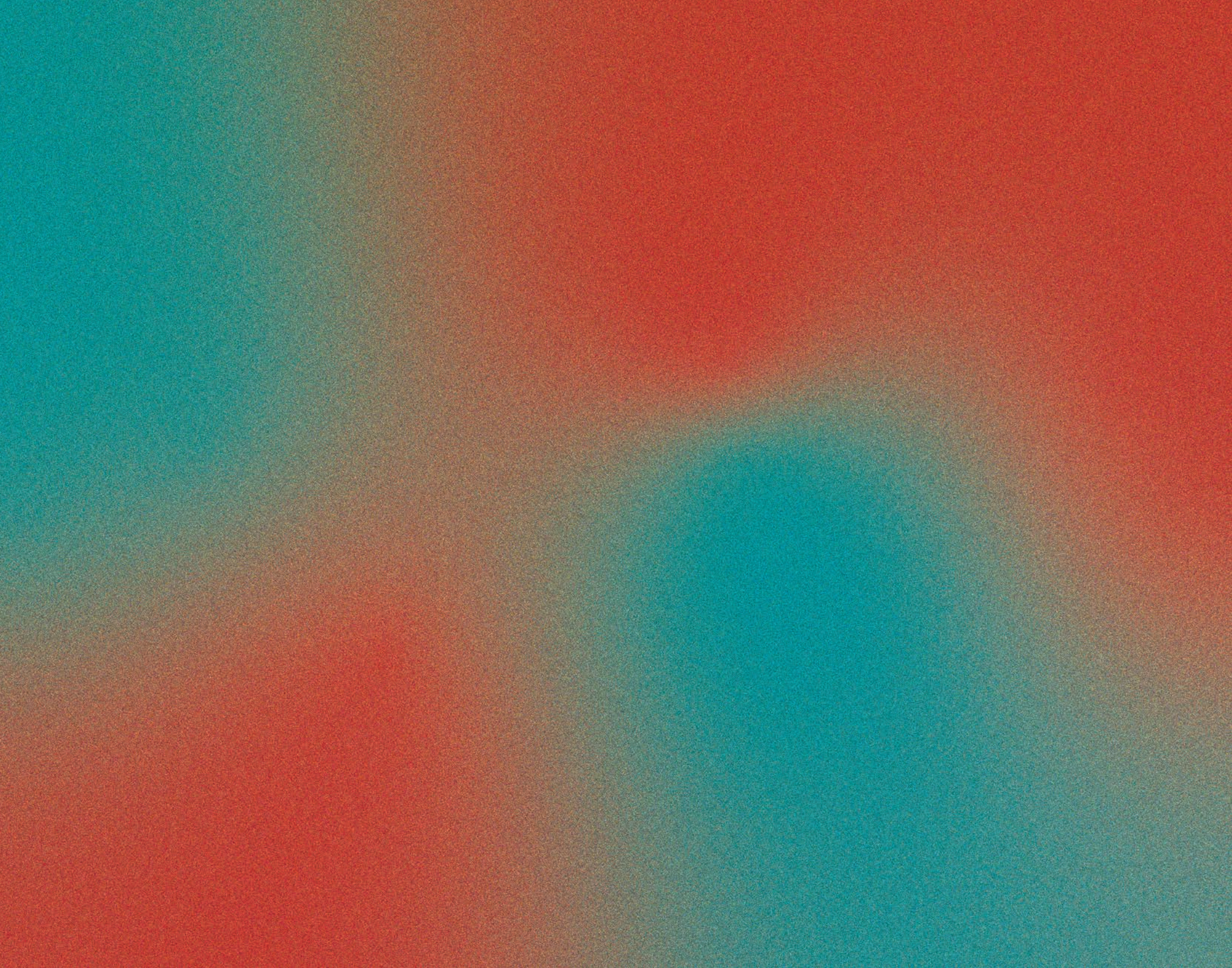
This, admittedly sounds quite overwhelming.

But I promise there is hope...

The reason why I start this segment on climate communication by introducing the complexity of the climate crisis, is because keeping in mind that climate change itself is a contradicting issue.
Many media channels and campaigners tend to communicate this crisis by focussing solely on the ecological or scientific side of it, but this is only one side of the medal. In this case we cannot rely only on our perception, we do not immediately see the effects of the decisions that we make, and maybe we never will. Not being able to rely on our perception of course, is quite confusing and makes it hard to relate to the climate crisis.

Since we cannot see or even feel the effects of the crisis, communicators must find new creative ways to adress the issue.
This is where borders between design and politics, art and science, feeling and knowing are being blurred out. As Rittel and Webber suggested we must not approach the climate crisis like any other crisis. We as communicators need to find new ways to create proximity and to support people when approaching the issue.





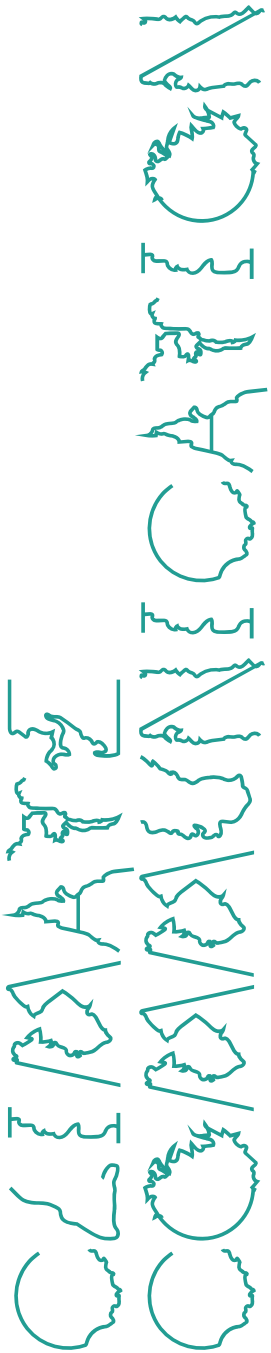
Climate Communication and the Media

The concept of “Global warming’s five Germanys” suggests that most Germans, regardless their view on climate change, use TV as a primary, reliable source for information on the climate crisis. Followed by magazines/tabloids/newspapers and radio as well as the internet and conversations with friends and family. The media seems to play an important role in navigating through and shedding light on a complex issue such as climate change.

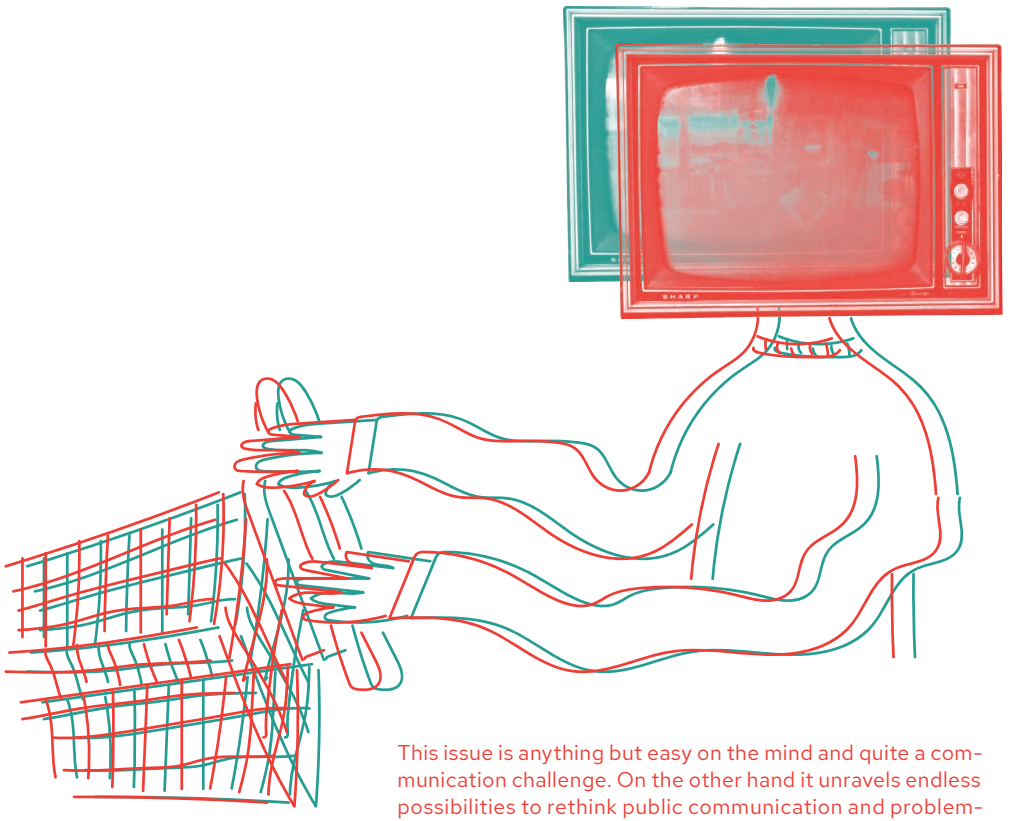
In the following abstract I will share the results of my research on the importance of media during the climate crisis. I will look at different framings that are used to communicate the issue. As well as reflect on the role of journalists within climate communication, since they form the largest group of communicators in mainstream media. Another aspect I would like to introduce is the effect of “doom and gloom” narratives and how hearing bad news about the climate crisis impacts our motivation to engage with the issue.

Another focus point will be the impact of imagery in climate change communication and how different types of images help to get personally involved with the problem.

Finally I will dive into the power of social media and online climate communication, with a little discourse on twitter-usage within the climate justice movement and mobilisation. And question how online campaigns can trigger behavioral change towards more eco-friendly choices.



This may sound quite overwhelming, it certainly does to me. If at some point you feel like it is all a bit to much, I invite you to sit back and take a few deep breaths and reflect on what you have just read. I definetaly had to do that several times in the process of writing this thesis.



This issue is anything but easy on the mind and quite a communication challenge. On the other hand it unravels endless possibilities to rethink public communication and problem-solving methods. This is why I get so excited to think about all the ways communication design can join forces with fields like politics, sociology, psychology, social work, care-work, science, ecology and many more. We all have the possiblity to get through this together, this is an opportunity to unite and see how each and every one of us can find their place within this problem-solving process.

Framing the Crisis

The climate crisis has been more or less present in the media for around 30 years. And has increasingly been subject of reports on different media channels over the course of time [1]. Highs and lows in the frequency of reports on the issue fluctuate with political events or extreme weather.

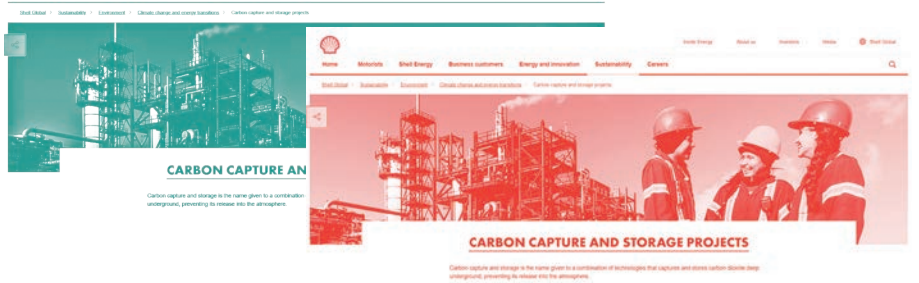
Since the beginning of public climate change communication a main framing, the so-called "Masterframe" of anthropogenic climate change has been dominating most mainstream media on a global level. [2] This is due to the work of the IPCC, clearly stressing within their reports the grave effect that human behavior has on the rapid, anything but ordinary, heating of our climate. An "interpretive community" of climate journalists that has formed itself around those statements that has established this frame as a basis for most other frames [3]. Another reason for the prominance of the anthropogenic climate change frame are the UN Climate Conferences held every year which base their discussions on this statement.
Aside from the masterframe exists the "uncertainty frame" which portrays the issue of climate change as an open debate between scepticists and people concerned about climate change. This is an especially dangerous framing since it suggests that there is uncertainty about the question whether humans are the cause of climate change or not, as if there were two sides with balanced arguments, which is not the case with the anthropocentric climate change we are talking about here. The uncertainty frame reoccured especially during the 1990s in the US where a scepticist's perspective was represented in every second article [4].

By framing I mean the basis, or the common ground on which climate change is being discussed.

anthropogenic, meaning human caused

A third frame which I come across a lot more frequently at this point in time is the "economic consequence frame". It is usually used to justify political inaction, focussing on negative economic consequences that may occur while reducing our emissions. This frame can occure as a "counter argument" to the demand of immediate action on climate change and is quite popular among fossile fuel and automotive industries.

Having mentioned before the masterframe of anthropogenic climate change is prominent in media on a global level, it is important to note that apart from the master frame, climate change is not communicated in the same way in all countries. In Sweden for example the moral aspects are addressed more extensively while in the Netherlands media focuses more on technological solutions, called the "Ecological modernization frame", and in Germany we like to stick to the general



"warmist" / "anthropogenic climate change" frame. In Australia and the US the "scientifiy uncertainty frame" is still a lot more prominent than in the other countries [5]. The "Ecological modernization" frame mentioned implies that the climate crisis can be solved through technical innovation, which is a frame especially popular in the industry sector all over the world. All of those frames do not only differ slightly from country to country but have also evolved with time. By now the "uncertainty frame" has gotten rather outdated [6] and has been taken over by the "economic consequence frame" as well as the "politicised conflict frame". This frame displays the climate crisis not as a debate about scientific certainty or uncertainty, but rather as a conflict between political parties and political standpoints. Another increasingly popular frame, especially among climate activists is the "anti-capitalist frame" which questions whether it is possible to achieve climate justice in a campitalistic system at all or whether we need to adapt the way we think about unlimited (economic) growth on a planet with limited resources.

And hopefully we start to see actions based on this frame very soon as well...

"We should set realistic climate targets for ourselves. Around one fourth of our GDP is dependend on the industry. We have to consider, what it can afford. I share MP Kretschann's view, who beliefs that it would be wrong to ban combustion engines."

All of those different ways to frame the same issue display its lack of defining properties. The climate crisis kind of seems to touch economic, social, political, scientific and ecological aspects at the same time. Every player (be it the oil and gas industry, your uncle or the head of a state) can pick and choose which part of the issue they would like to focus on, in order to justify their actions or inactions and "believe" what they would like to believe. [7] This way of thinking about and communicating climate change can quickly lead to noone really feeling responsible for changing anything, because everyone can simply use the frame that works best for their own intentions. This may seem quite comfortable for now, but unfortunately is not how we can solve the climate crisis and ensure a more stable life for future generations and vulnerable communities

	Anthropogenic climate change as a global problem	Scientific uncertainty	Economic development	Ecological modernization
What is the main idea of this frame?	Scientific evidence shows that climate change exists and is man-made, action is neeed.	Scientific evidence about climate change is inconclusive, therefore, action would be hasty	Climate change does exist, but measures will seriously harm (domestic) economic development	Technological development is key to fightig climate change, industry and developed countries as pioneers
How is this frame communicated?	Scientific evidence points to “climate catastrophe”, atmosphere is global common good, historically industrial countries have a higher responibility for human-made climate change, climate justice needs to be considered	Climate science as “alarmist” and “junk science”, its background is a political complot, climate change is “a theory, not fact”	Climate change regulation leads to damaged economy and “restricted lifestyle” as well as a “transfer of wealth”	Corporations acknowledge “responsibility”, reframe them as “business opportunities” for “bridging technologies”; “Ecoimagination”
Who prefers to use this frame?	Prominent individual scientists and activists, scientific institutions and organisations, IPCC, environmental NGOs, green parties	Fossil fuel, coal, automotive an electric utilities industry and their associations; think tanks, conservative politicians, especially in the US	US fossil fuel, coal and automotive industry, Australian coal industry, conservative politicians	European multinational corporations, later adopted by many industry sectors in many world regions

A table with an overview of these four different frames and their main supporters from Mike S. Schäfers abstract “Climate Change and the Media” in the International Encyclopedia of the Social 2015 can be found here.

Sources that this table is based on:
NGO, non-governmental organizations; IPCC, intergovernmental panel on climate change. Sources: Schlichting, I., 2013. Strategic framing of climate change by industry actors: a meta-analysis. Environmental Communication: A Journal of Nature and Culture 7 (4), 493–511; Schmidt, A., Schlichting, I., in press. In: Hemmer, I., Müller, M. (Eds.), Sustainability and Climate Change: Interpretations and Claims by Societal Actors from Germany, India and the United States. Oekom, Rioþ20, Munich with additions from McCright, A.M., Dunlap, R.E., 2003. Defeating kyoto. The conservative movement’s impact on US climate change policy. Social Problems 50 (3), 348–373; Nisbet, M.C., 2009. Communicating climate change: why frames matter for public engagement. Environment 51 (2), 514–518; Weingart, P., Engels, A., Pansegrau, P., 2000. Risks of communication. Discourses on climate change in science, politics, and the mass media. Public Understanding of Science 9 (3), 261–283; and from own research.

Journalists and Climate Communication

This discrepancy of journalists trying to provide easy to understand pieces of information while scientists communicate tendencies that may not be 100% predictable is also explained in an article by Axel Bojanowski. He critcises journalists for not displaying the different, contradicting aspects of climate science, more transparently and accusing parts of the journalistic commnity for communicating perdictions made by scientists as far more likely to happen than they actually were. Bojanowski claims that it has become very difficult for journalists to address uncertainty or unanswered scientific questions without being cornered as "climate change deniers". This leads to "homogenisation" of report on the climate crisis where only one standpoint is accepted. The one of undoubtable, infallible scientific proof that all all published scenarios are going to happen with almost 100% certainty.

He proceeds to criticise that the moralisation of the conflict makes it easy to ignore certain aspects of the issue and mentions the sociological phenomenon "Noble Cause Corruption" in this context. The phenomenon implies that important sides (in this case uncertainty in science) are deliberatly not mentioned, when communicating a topic, because they may weaken the argument made that supports an important point (the urgency of the climate crisis). Bojanowski closes by stating that it should be journalist's task to critically analyse different scientist's claims and statements, not just citing the same scientist's studys because they fit the narrative and the fraiming well. Only if scientific claims are neither altered nor silenced then, but communicated and debated openly, the public can be prepared accurately and find solutions for the issue Bojanowski stresses [9].

Bojanowskis point connects back to the concept of wicked problems and shows how important it is to communicate the whole picture of the climate crisis. A one-sided approach, even for noble reasons, does not do the issue justice and can create divide among readers.

Bojanowski mentions the term "climate change denier", which is a term that I frequently came across when reading about debate on climate crisis. Does it help to lable people, who question the certainty of climate science as "deniers" or "scepticists"? In a short letter [10] Saffron J. O'Neill and Max Boykoff challenge the labeling of heterogeneous views as "denialism" or "scepticism". They state that the "use of the terms will further polarize views on climate change, reduce media coverage to tit-for-tat finger-pointing, and do little to advance the unsteady relationship among climate science, society, and policy." The term "denier" fo example links directly to Holocaust denial, while the term "scepticists" is problematic since scepticism is a crucial part of the scientific method and "contrarian" as a term suggests a different side or approach on human-made climate change. The challenging of scientific evidence is oftentimes motivated not only by funding but also ideological belief. This is why O'Neill and Boykoff suggest to define "contrarians" as those who "vocally attack climate science and who indiscriminately identify as skeptics, contrarians, and deniers.". This does not include those who are not convinced by science (for example due to the "balance bias", where anthropogenic climate change is portrayed as an issue with two opinions/two sides to it) or not convinced by solutions.

Writing this paragraph I was very undecided whether to include this point of view into my thesis at all, but since this is the exclusion of different points of view is the very subject of his article I had chosen to do so. I see his point that the distortion of science or the silencing of contradicting studies is not a solution, especially taking into account the aspect of the "wicked problem" which can only be solved by understanding the whole context first (including the uncertainties and the studies that may not fit into the narrative). Maybe it would have been interesting to additionally raise the question why journalists and generally people feel the need to alter and filter scientific facts, trying to convince the public as well as politicians that this issue is in fact very urgent.

I wonder whether reporting solely scientific studies and predictions will even get us anywhere or "prepare" us for climate change, no matter whether its contradictions are being expressed? I am all for openness and honesty and all against exclusion, conering and shaming people. While my activist heart screams my brain knows that this is exactly where I have to be careful and recognize emotional response.

Those, I suspect, are the type of people that Bojanowski is also talking about, which feel cornered when challenging the certainty of scientific statements.

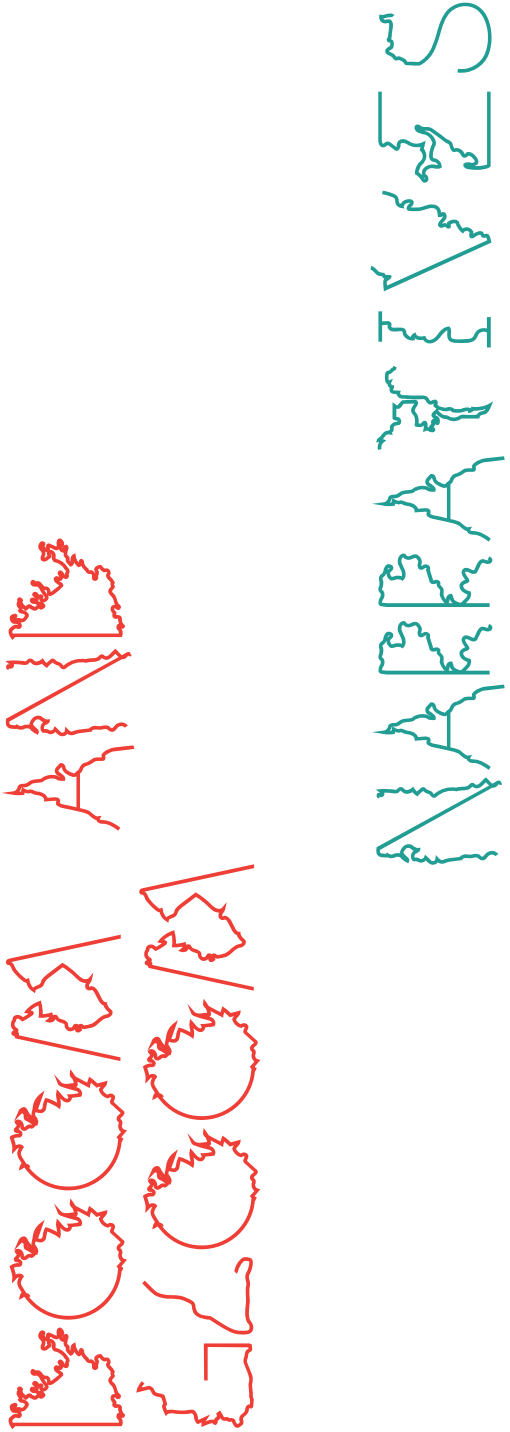
I know I am quick to judge when it comes to this issue and my activistic heart keeps screaming, but I know they are making a point. Judging, name-calling and finger-pointing will not get us anywhere, collective effort will.

Doom and Gloom Narratives

Another aspect of climate communication that I have come across mutiple times in mainstream media, is called the “doom and gloom narrative”. I have read headlines stating: “If we do not take action now we will be cooked by 20XX.” “The earth will be inhabitable in X Years.” “We will all die out just like the dinosaurs by 20XX.” Most of the those horrific future scenarios are, unfortunately, very true and most of the time backed up by scientific facts. But how do those stories of “doom and gloom”actually affect people’s motivation to take action on the climate crisis?
I will start of by focusing on the relation between social problems and society in general and then proceed to analysing the impact of doom and gloom narratives on our personal motivation to take action. Finally I would like to display the distance that doom and gloom narratives create using the example of reportings on indiginous communities in Alaska, heavily affected by climate change.

Why social problems only exist (to be solved) when society wants them to:

I found the article by sociologist Herbert Blumer from 1971 called “Social Problems as collective behavior”[11] quite helpful to open this topic. He explains in his theory “that social problems lie in and are products of a process of collective definition”. This means that “the process of collective definition determines the career and fate of social problems, from the initial point of their appearance to whatever may be the terminal point in their course.” What I read in this is that a social problem, like climate change, must be recognized by society in order to exist in a way that it can be addressed and solved. A sociologist or scientist cannot define a social problem in the same way that society can. The “objective make-up” of the problem, as Blumer calls it, can be defined, of course, but this doesn’t serve to solve the issue. It rather attributes to the collective definition of the problem and can be altered or re-defined in this process. In his abstract Blumer defines different



steps or as he puts it a “career” that a social problem has to run through in order to even get to a point where an “official plan of action” is established and ultimately implemented. [11] I find this aspect especially important for communicators since the media, plays an important part in the step “Legitimation of Social Problems”. In this step the social problem needs to “acquire social endorsement if it is to be taken seriously” and the media is one “recognized arena of public discussion” where this legitimation can take place.

Since many of us here in Germany have not experienced the severe impacts of climate change we must rely on information from scientists (mostly communicated to us through mass media) and predictions. But if those framings do not convince us or, even worse, put us off, the problem of climate change will not be legitimized and can never enter a stage of “mobilisation for action” or the “formation of a plan for action”.

Do bad news motivate people to change their behavior?

It is quite safe to say that the apocalyptic narrative has been used a number of times in the past, be it the cover of the 33rd issue of "Der Spiegel" in 1986 with the headline "climate-catastrophy" and an image of the drowning Cathedral of Cologne. Or the cover story of the New York Times Magazine published July 10th, 2017 displaying every imaginable (and un-imaginable) climate-horror-scenario from heat death to climate plagues, unbreathable air or permanent economic collapse, predicting perpetual war and poisoned oceans as well as the end of food [12].

In his article from August 2017 "Climate gloom and doom? Bring it on. But we need stories about taking action, too" [13] Jon Christensen, a professor in the Institute of the Environment and Sustainability at the University of California, Los Angeles, states that dystopian, apocalyptic scenarios are quite easy to construct and base on scientific data, while constructive, collective solutions, that must follow such a displayal of horror-scenarios in order to not leave readers feeling completely powerless, are much harder to come by. This is a phenomenon which is quite a recognizable one for me, shows that it is quite easy to point out a problem or to complain about something that is not going the way we would like it to, but fixing it, facing it and finding a solution oftentimes turns out to be much harder. If people, who are rather disengaged with the issue of climate change, are solely exposed to the doom and gloom narrative they tend to distance themselves more from the issue. If a person is already among those falling into the category concerened or even alarmed then this type of messaging will either strengthen this concern or in a worse case lead to losing hope on fixing the issue. This would mean that the problem fails to enter the stage of "mobilization for action". [14] Paleoclimatologist Michael Mann of Penn State University even describes the aforementioned New York Times magazine article as a "paralyzing narrative of doom and hopelessness." and states that the warming of the globe and its consequences are already as bad as is and do not need further dramatization and exaggeration [15].

Quite a depressing listing, I think. And even though I do not know how true or likely all those scenarios are I feel a strong urge to close the tab with the article and move on to something a little more uplifting.

This again connects back to the small abstract above about the homogenisation of climate communication, the New York Times Magazine article is in my opinion a great example for just that: A quite one-sided, maybe even exagerated interpretation of scientific data, which displayed scientific data in a rather distorted way. Now that the incorrect communication of scientific data in this article is being called out by scientists it may lead to people thinking that other predections are also merely fear-mongering and "alarmism" and not to be taken as seriously. Which is probably the exact opposite of what the New York Times Magazine was trying to achieve.

Victimhood and Creating Distance

Another really interesting aspect, apart from the doom and gloom narrative that may paralyse people rather than mobilise them is stated in the abstract "Doom and Gloom: The Role of the Media in Public Disengagement on Climate Change", published in May 2018 by Elizabeth Arnold, Joan Shorenstein Fellow, Spring 2018, and Associate Professor of Journalism of the University of Alaska [16]. Here the climate change narrative is analysed regarding reports on remote communities in Alaska. In Alaska people are confronted with the consequences of climate change much more directly as we are. They have been involved in resettlement plans since the 1990s because areas, primarily inhabited by indiginous people, are on the verge of disappearing due to rising sea levels and melting ice. Since then journalists have been eager to document the "first victims of climate change".

But who are those victims? An analysis of some of those reports (between 2013 and 2018) established that most stories were not necessarily reporting on humans or how different people's lives are impacted by climate change or what they do about it. Most reports adressed affected aspects of the ecosystem such as sea ice, polar bear or walruses. The term "polar-bear" was mentioned twice as frequently as the term "indigenous" in the 1450 analysed stories. If humans are mentioned at all, it is usually not an indiginous Alaskan who is speaking but rather "geologist(s), expert(s), scientist(s) or doctor(s)". Now, if indiginous communities are mentioned, they are usually displayed as "climate victims" "struggeling", "facing losses" or being "unequipped" for dealing with the issue. The article then proceeds to make a very important point in my opinion: While the media displays indiginous communities as victims of some kind of climate "fate", they fail to communicate that post-colonialism and continuous marginalisation made them even more vulnerable to the consquences of human-caused climate change. This took place for example in the 1950s when indiginous communities leading a semi-nomadic lifestyle were forced to settle due to policy changes mandating all native children to be formally educated. Schools were build by the coast, because materials could be delivered easily and this is the exact place where indiginous people settled and are facing relocation now.
The narrative of victimhood is especially problematic because of two aspects: It ignores the fact that issues, such as flooding, relocation, weather extremes, distruction of habitat, losses of homes, vulerability of marginalised communties are the consequence of policy changes. And secondly fails to recognise and accurately portray the resilience and the response to the issue that those communities have been working on (successfully) for years.

A quote by community planner Sally Russle Cox stresses this argument again: "These people are taking control of their future and developing a new community. It's a very powerful story. Victim is not part of who they are. I think we need to be telling the story about not only how they are doing under difficult circumstances right now but what their vision is for their future and how they are working to go forward with that vision. It hasn't been in the news because I think the media wants to tell the other story."

Another example that shows how the media really seems to want to tell "the other story" from the article is an interview by a journalist with the iniut elder Quqqasiq Apak:

Don't get me wrong, polar bears are really really important and very cute and unfortunately way to close to extinction, I am assuming though that we as humans are probably more likely to relate to the story of another human than a polar bear.

Or dare I say mostly industrial-nation-caused?

In conclusion we can say that doom and gloom narratives, even though they have been used quite extensively leave people feeling rather powerless and unable to act. Pairing this narrative of displaying realistic future scenarios for consequences of climate change together with providing strategies of individual and collective action can help to provide identification with a certain action around climate change, in order to take action.

Interviewer: Did you used to use igloos earlier in your life more?

Apak: Yes, very much so, it was our main form of shelter when you are traveling. While you were out, as soon as it would start to get dark outside you would start searching for snow that was suitable for igloo.

Interviewer:

Why don't you rely on igloos anymore?

Apak:

Because we have great accommodations

from qallunaat (non-Inuit)

such as tents and other items that are easier to use.

Interviewer: Is it more difficult to find the right ice and snow conditions to build the igloo now?

The published interview then was titled:

"Deteriorating ice and snow conditions have diminished the Inuit's ability to travel in safety, damaging their health, safety, subsistence harvest, and culture."

The Impact of Imagery

Having explored how narratives and the use of framings and language in articles affect the way we view climate change, I would like to take a look at the aspect that is especially interesting for me as a visual designer: imagery. What I love most about imagery is that it communicates on an emotional level as well as the seemingly endless possibilties to communicate visually. In the following abstract I will question whether this way of communication can actually impact public engagement with the climate crisis and explore the different effects that different types of images have regarding perceived salience and efficacy of people towards this issue.

Just like language images can have positive or negative impacts on how empowered and motivated people feel to take actions on climate change. While the usage of a certain image might make them feel disconnected or paralised while another one promotes hope and proximity.

An abstract by Susie Wang, Adam Corner, Daniel Chapman and Ezra Markowitz called "Public engagement with climate imagery in a changing digital landscape" from 2017 states that a "rather limited set of images has come to represent climate change in the public discourse" [17].
Part of this set of pictures are rather iconographic images such as polar bears, melting ice or other animals. Graphic imagery of consequences of extreme weather events, or pictures of the fossile fuel infrastucture are widely used, as well as images of politicians. The absence of humans, except for politicians, is also remarkably present within the visual communication of climate change. The abstract suggests that this might be quite problematic since the absence of human stories might leave out a chance to identify with the issue. Not representing affected people in visual communication can lead to a distancing from the issue suggesting that climate change only takes place where polar bears are.

One sided approaches towards climate change... sounds familiar to me

Shifting the focus from climate change being an environmental issue to viewing it as a social, human issue is crucial in understanding the role we play within this system and in taking collective and individual action to solve it. If the imagery we are exposed to fails to bring across this point, we might be missing an opportunity to communicate the climate crisis in a compelling way.

How stock imagery influences perceived salience and efficacy of individuals

Research on imagery found on stock image sites or google images and how those images are perceived by the general public is not too extensive. Yet there have been analysis made by Saffron J. O'Neill , Maxwell Boykoff, Simon Niemeye and Sophie A. Day "On the use of imagery for climate change engagement" [18]. In their work they focus mainly on personal importance (saliance) of the image to the viewer and whether it conveys the sense of being able to do anything about climate change (efficacy). The examined imagery was derived from multiple newsletter articles related to climate change in 2010 and included, among others, images of floodings, solar panels and electric cars, politicians or other recognisable figures, polar bears, glaciers and floods.
Their analysis led them to the following results:
The picture of the flooding ranked highest as the image that made climate change seem most important. Imagery displaying air pollution ranked highly or saliance as well, while images of public figures, like politicians consistantly ranked quite low regarding perceived importance of climate change.
Interestingly enough those images that provoked feelings of threat or distress, making climate change seem very important did not rank highest in efficacy. Meaning that scary, threatening images make climate change seem like an important issue but do not make us feel like we can do much about it.
On the other hand images displaying solutions, such as solar panels or electric cars were ranked as highly efficacious followed by images proposing solutions like low meat consumption, political action, cabon offset or sustainable housing. Public figures, again, ranked consitently low regarding the effect they have on how empowered people felt.

Imagery, emotion and „environmental beliefs“

A different study on “Affective Images of Climate Change” by Betsy Lehman, Jessica Thompson, Shawn Davis and Joshua M. Carlson published in May 2019 [19] takes not only emotion, regarding arousal (whether an image was perceived as calming or exciting) and valence (whether it was viewed as negative or positive), into account but consideres the participant’s “environmental beliefs” and the relevance of the issue. Again here, those images considered the most relevant to climate change were also the ones that were perceived as most upsetting, and usually displayed the outcomes of extreme weather events. Images showing potential solutions were not considered especially exciting yet ranked frequently in the top 50% of images relevant to climate change.

Regarding the “environmental beliefs” of participant in relation to the way they view climate change imagery, it was found that individuals with greater pro-environmental beliefs were likely to generally give higher relevance ratings to images compared to participants who were not as concerned about the environment.
Based on their findings of this study an open image library was created were each image is tagged, showing how it was ranked by participants (https://affectiveclimateimages.weebly.com/ accessed Nov/2020)

It might be interesting to note, that even though pictures of politicians do not seem to have a strong perceived correlation with climate change nor do they evoke feelings of empowerment, they are still most frequently used in newspaper articles reporting on the climate crisis (especially in Australia, the US and the UK).

This seems quite problematic. I can imagine that this usage of imagery may lead to the general public perceiving the issue as a solely political or scientific one, missing the fact that we are indeed dealing with a social problem that requires public engagement.

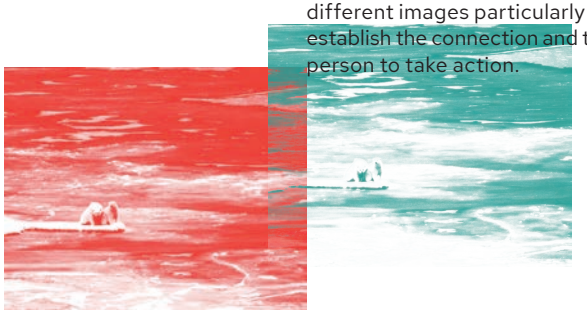
Iconographic imagery

The usage of iconographic images seems to be quite prominent in the context of visual climate communication as well [17]. This type of imagery was coined by NGOs such as Greenpeace in the 1990s and 2000s and is still one of the images closely associated with climate change. The article “Public engagement with climate imagery in a changing digital landscape” stresses again that the polar bear might serve as

polar bears...

“a simple visual shorthand for the issue” but may fail to encourage a connection to people’s day-to-day lives, leaving the human out of the equation. This does not only happen in NGO contexts, scientific bodies such as NASA also seem to prefer to leave human-centered-imagery out of their visual communication and prefer to publish before and after pictures or satellite imagery.
The internet on the other side plays a very prominent role in changing this commonly used and potentially not-as-efficient-as-could-be imagery . Via social media, as well as sites like the Huffington post, vice or Buzzfeed. Those platforms seem to be moving away from traditional iconographic imagery and focus on authentic stories, informality and unstaged imagery. People sharing their own views of the impact of climate change in their lives might also be a powerful way to further establish the climate crisis as a social issue and bridge the distance that is so easily created when looking at images of melting ice caps or politicians in regards to climate change. Because of its fast moving character the medium internet and the usage of climate change imagery has to be re-analysed continuously of course, but it definitely has the power to shift the way we (visually) communicate climate change.

One aspect that I am taking away from all those studies is that there is no wrong image to convey the message of climate change but there may be different contexts which suit different images particularly well. One image alone will not establish the connection and the mind-set shift needed for a person to take action.



Taking into consideration what goal we have when communicating climate change, who we would like to reach and evaluate whether we would like our viewers to feel empowered or shocked, whether we want them to take action or relate to the story being told on a personal level, and carefully choose a suited image, we can possibly create a more persuasive narrative over time. This simply means, quoting the article again: “There is no one-size-fits-all approach because different goals and different audiences will require different strategies.”

The role of Social Media in Climate Communication

Since communication does not only take place through newspapers or on TV, it might be interesting to go one step further and include different social media platforms into the analysis as well. News reports have partly been failing at telling a compelling, complete and personal story of climate change and have struggled to engage the public and communicate the issue.
Reports usually cover the climate crisis on a scientific and political level am leaving the social aspect at the door.

Social Media works in a different way than regular media. On TV or in newspapers, communication usually goes into one direction. On social media platforms, participants are able to generate content, interact and react to information submitted by other users. Ordinary citizens are able to voice their opinions and organise public protest.

Social Media as a Soft Power Tool

The abstract "Role of Social Media as a Soft Power Tool in Raising Public Awareness and Engagement in Addressing Climate Change" by Aleksandrina V. Mavrodieva, Okky K. Rachman, Vito B. Harahap and Rajib Shaw from October 2019 [20] states that while governments are failing to act accordingly to achieve the goals set in the Paris Agreement and Co_2 emissions rose by 2% in 2018, social media provides an opportunity for "bottom-up initiatives around the world" to take "the initiative in their own hands". Social media is labeled as a "new form of soft power which can provide input into the discussion on climate change and possibly influence the current international political mechanisms." But what is soft-power? And how can this help us in resolving the climate crisis?

"Soft-power" is a concept by political scientist Joseph Nye, which he defines as "the ability to influence the behavior of others to get the outcomes you want" without enforcing a certain type of bahavior. Instead soft-power targets the preferences of people and aims to influence those through important public figuers or, even better, establishing attractive cultural or political values. Social media classifies as a soft-power-tool, since it is being used by regular people, who do not necessarily represent a political party and whose messages can spread extremely quickly and reach a broad public, triggering reactions and possibly awareness on the issue. When, through this reaction, a broad public accepts the climate crisis as an urgent issue, it can ultimately lead to policy changes in favor of our environment.

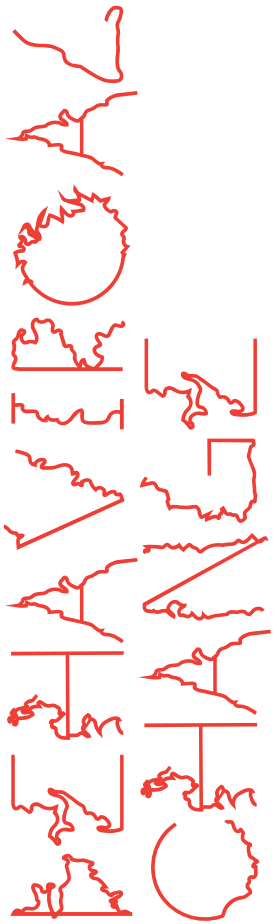
Similar to reportings on climate change in mainstream media, an increase in awareness of the issue can be observed around certain events, like political events (for example the US withdrawal from the Paris Agreement), scientific publications (such as the IPCC report) or events evolving around public figures like Leonardo Di Caprios Oscar speech in 2016. These pieces of information where collected by using Google Trends to find out how frequently specific key words such as "climate change" were searched and when.

Having mentioned the advantage of social media that anyone can voice their views openly and reach a broad audience let's also talk about one of the disadvantages of social media: Anyone can voice their views openly and reach a broad audience. While of course scientific reports are very hard to understand, lengthy and complicated and only accessed and understood by a very academic, very exclusive group of people, the good part about it is that it has to be approved and checked before it can be published. On Social Media Platforms pieces of misinterpreted, or simply false information can spread easily and lead to mistrust. Algorithms also filter the type of content we see, which means that we are usually not exposed to new types of information and move in the same bubble, enhancing existing opinions instead of developing and expanding knowledge. If an internet user has been reading and searching for online content with negative connotations regarding climate change, they are likely to be receiving more such content.

This does indicate that communication around the topic of climate change does raise awareness and especially events relating to the issue but two questions remain still: Does this increase of awareness also translate into people's behavior in their day-to-day lives and does public attention towards the issue lead to policy changes? The aforementioned abstract discusses this question and indicates that communication about climate change online has helped NGOs acquire new members and organise offline for activities and protests. A link between gathering online information on climate change and increased public engagement can partly be observed.

Social Media can, in my opinion, in no way replace mainstream media when it comes to climate communication, since it can never serve as a reliable source of information. It can however be used as a tool to keep holding decision makers accountable and help with establishing a wider spread understanding of the issue and the implementation of behavioral changes.

In addition social media is not the only source of news and mostly used by a very specific group of people. Confusing or misleading pieces of information serving political or personal interests are still spreading in media channels feeding into people's mistrust which alongside with lobbying by polluters like the automotive industry and lack of interest can still lead politicians to making decisions in favor of our capitalist system instead of the environment. Especially since the development of our economies have only been possible through the exploitation of other countries' resources e.g. fossile fuels or the agricultural sector.



Media Campaigning and established theories of behavioral change

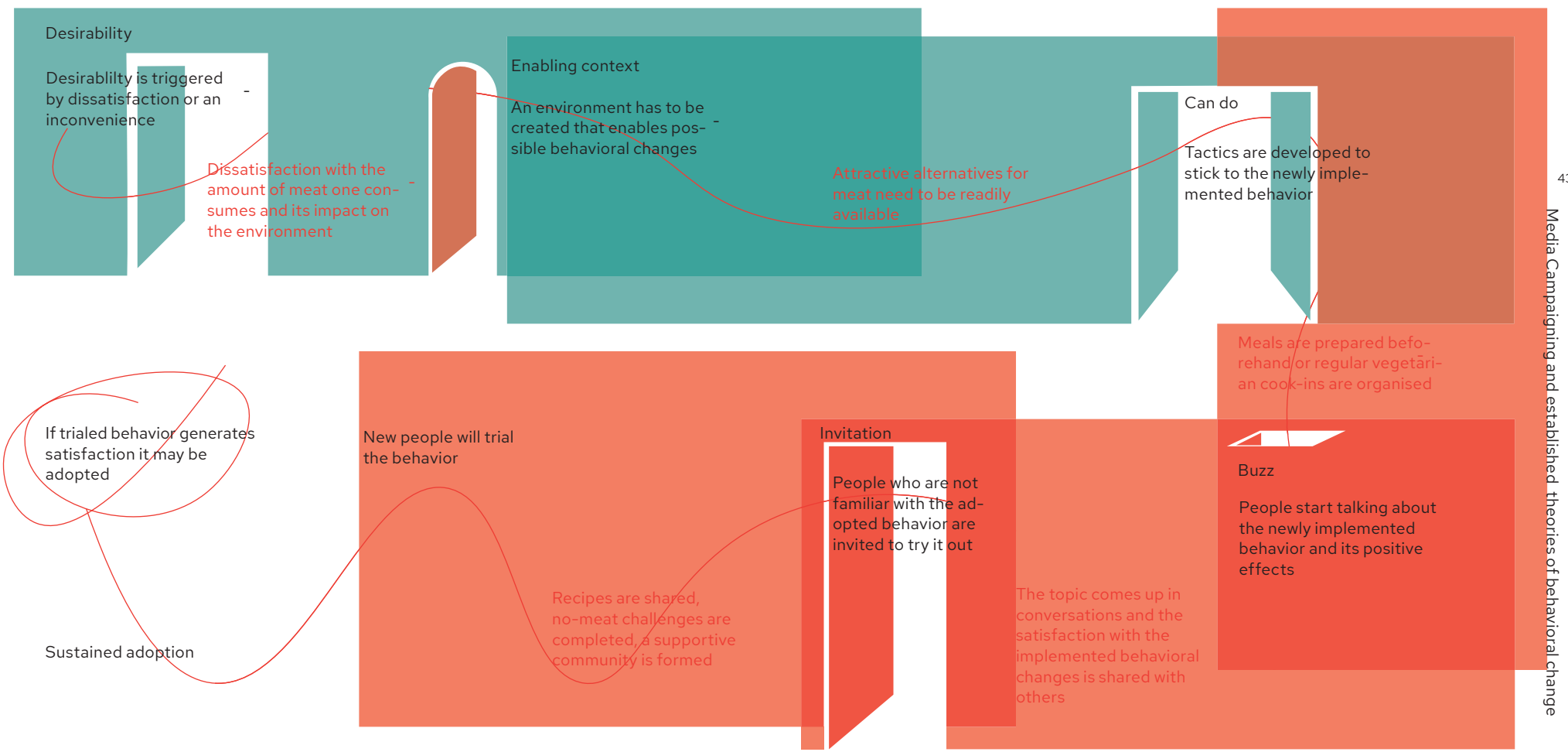
The conferece paper "Talking climate change via social media: communication, engagement and behaviour" from May 2016 by Lara S. G. Piccolo , Diana Maynard and Christoph Meili [21] raises the question how already established theories of behavioral change can be translated and used for trageted social media campaigning.
Most people are not aware of their individual impact and their power to make a difference in the complex and multifacetted issue of climate change and may struggle to see the connection between their actions and consequences for our climate, nature, society, the economy and our future in general.

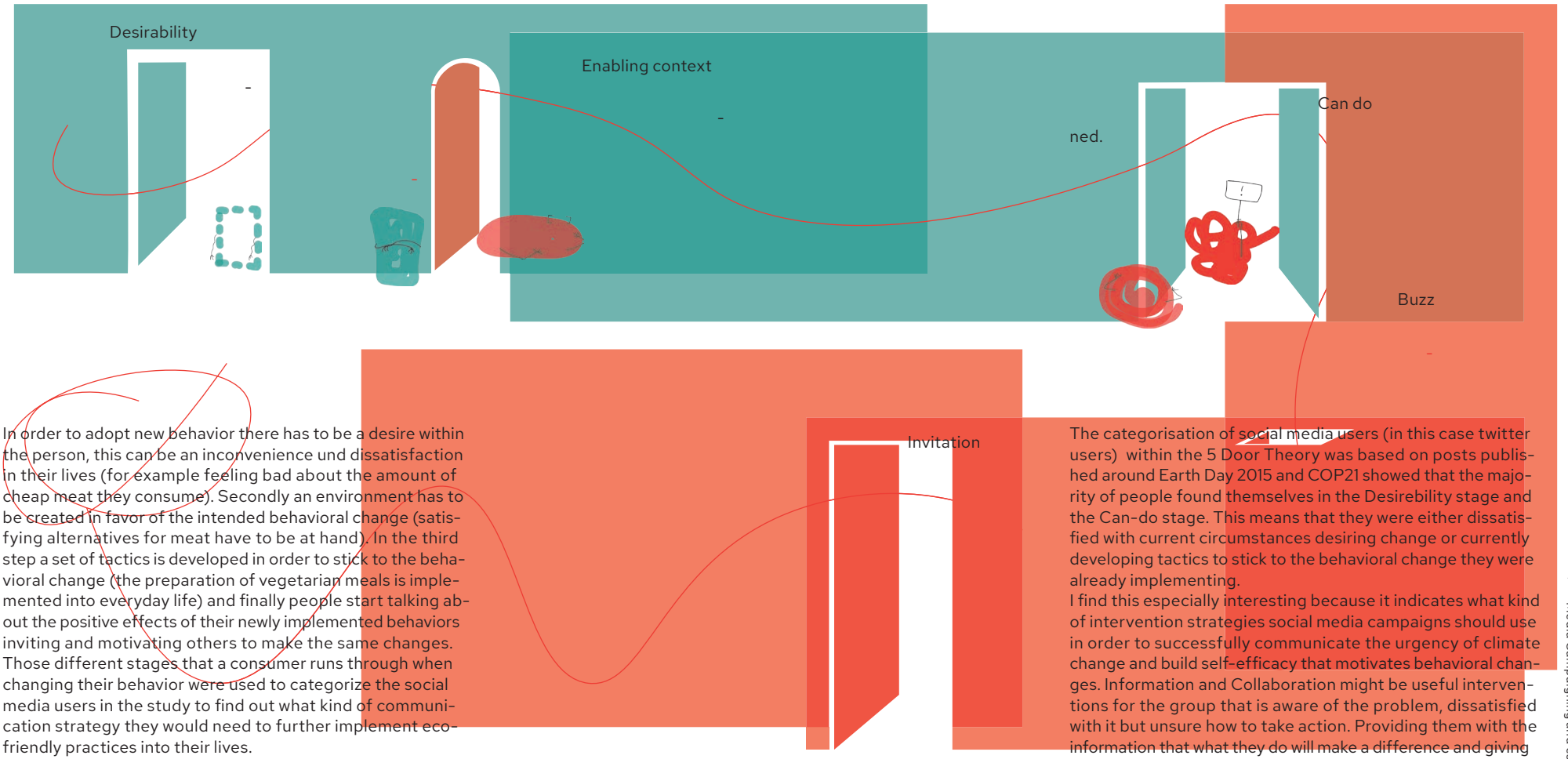
The paper suggests that in order to engage people with an issue, awareness for the topic has to be created. Jonah Berger has developed 6 different aspects to consider when creating engaging content. Those steps include:

1. Social currency
(people share things that make them look good)
2. Triggers
(it is part of the users' everyday life, and on top of their minds)
3. Emotional resonance
(when users care about something, they share it with others)
4. Public
(the idea or product is built to show and built to grow);
5. Practical value
(people like to share practical or helpful information)
6. Storytelling (people tend to share stories, not information).

Looking at those different steps it strengthens our previous assumptions that climate change needs to be communicated in a relatable way that is close to people's lives providinig them with concrete solutions. Another crucial aspect is to consider the medium that is being used to communicate the message, since different social media platforms serve different purposes.

Another established theory for changing people's behavior is the 5 Door Theory by Les Robinson. He states that 5 different behavioral stages have to be passed in order to implement real behavioral change and consist of
1.) Desirability,
2.) Enabling context,
3.) Can do,
4.) Positive buzz and
5.) Invitation.





In order to adopt new behavior there has to be a desire within the person, this can be an inconvenience und dissatisfaction in their lives (for example feeling bad about the amount of cheap meat they consume). Secondly an environment has to be created in favor of the intended behavioral change (satisfying alternatives for meat have to be at hand). In the third step a set of tactics is developed in order to stick to the behavioral change (the preparation of vegetarian meals is implemented into everyday life) and finally people start talking about the positive effects of their newly implemented behaviors inviting and motivating others to make the same changes. Those different stages that a consumer runs through when changing their behavior were used to categorize the social media users in the study to find out what kind of communication strategy they would need to further implement eco-friendly practices into their lives.

After locating different internet-users within those five catgeories, a next step may be to look at different ways to intervene. Different ways to intervene, which are mentioned in the study include: information, discussion, making a public commitment to stick to a certain behavior, receiving advice, comparing oneself with others and setting goals. Collaboration, working together towards a collective goal, competition and rewards, as well as continuously stressing the positive benefits of the newly implemented routines and individually targeting people are further intervention strategies mentio-

The categorisation of social media users (in this case twitter users) within the 5 Door Theory was based on posts published around Earth Day 2015 and COP21 showed that the majority of people found themselves in the Desirebility stage and the Can-do stage. This means that they were either dissatisfied with current circumstances desiring change or currently developing tactics to stick to the behavioral change they were already implementing.
I find this especially interesting because it indicates what kind of intervention strategies social media campaigns should use in order to successfully communicate the urgency of climate change and build self-efficacy that motivates behavioral changes. Information and Collaboration might be useful interventions for the group that is aware of the problem, dissatisfied with it but unsure how to take action. Providing them with the information that what they do will make a difference and giving them concrete examples how to implement certain pracitices into their lives and in the best case connecting them with a group of people that is eager to do the same, could make them feel a lot more empowered and hopeful.
The group that is already implementing practices and seeking to sustain them long-term would do well with Discussion/ Social Feedback and being able to share stories and experiences with others. They also might benefit from positive incentives to keep going.

This is a very theoretical approach that has been used in a quite narrow setting (limited to one social media platform, and limited to a very specific time frame connected to very out-of-the-ordinary events) but I feel like it still gives us an idea of how communication of the climate crisis could work. It also shows what current communication may be lacking, namely: human stories, personal connection to the issue, self-efficacy, empowerment and hope.

Mass Mobilization via Twitter

A very recent study from May 2020 by Shelley Boulianne, Mireille Lalancette and David Ilkiw called "School Strike 4 Climate": Social Media and the International Youth Protest on Climate Change" [22] analyses the content of Tweets (regarding location and intention) published around the event of the Global Climate Strike in March of 2019 and what role social media played in connecting young people to take collective action. The connecting aspect is of interest here since collectiveness can be a successful implementation strategy when aiming to change behavioral patterns.

The focus of the study lies on mostly young people, who are generally more likely to express concerns regarding anthropocentric climate change. In this context social media appears to be a tool rather suited for an issue like climate change, where local action is required to achieve global change. Participants of the Climate Strike or other actions of the environmental movement are able to inform about offline actions online, mobilising more people on a local level while inspiring, sharing and connecting on a global level. Decision-makers can be held accountable by their citizens, while the global dimension of the issue can still be present and seeing the collectiveness of supporters all over the world might also encourage politicians to take action.

The intention or function of the tweets was categorised into 5 segments: Information, Opinion, Mobilisation, Attack/Blame and Other. Information tweets were the most frequently communicated messages online, mostly consisting of documentation of the protest, informing about an event, sharing information on climate change or sharing news articles. The second most frequent type of tweet was the "opinion tweet" voicing ones thoughts on climate change, the protest, youth protesters or youth in general, Attack/Blame came in third and Mobilisation-Tweets were the least frequent. This has already been observed in the organisation of other movements online, which does not necessarily indicate that usage of social media does not promote participation in protest, it rather serves as an information tool on location and time of action, stressing the importance of social media regarding organisation of like-minded people for collective political action.

Social Media is in my eyes not the holy grail of climate communication. It in many ways distorts realities, fuels misinformation and creates a lot more division and polarity than it promotes unity and collectiveness. Still I believe that it is a powerful tool to reach and communicate to people in a more direct way. Using different social media platforms as a single source of information will in my opinion probably not lead us to the needed collective action. Yet combined with other media channels such as TV, newspapers, etc. and consciously using imagery and language to create proximity and efficacy, we may be able to find new approaches towards the climate crisis.

Conclusion Part I

What I take away from this first part of the analysis is that media coverage of climate change plays a crucial role in informing the public and mobilising them to collective action which then can influence policy making. Unfortunetaly especially in mainstream media iconographic imagery and framings are predominentaly used to address the issue such as polar bears or melting ice. This is problematic because it creates distance to the issue and frames the climate crisis as an environmental problem failing to shed light on the social, economical, industrial, political and scientific aspects.
Incomplete story telling is not only found in iconographic portrayal of climate change but also within narratives of "doom and gloom". Negative fear inducing framings can display scientific data in a distorted way, create narratives of powerlessness and victimhood and leave lower peoples perceived efficacy. It seems important to keep in mind that a focus on collectiveness and solution based communication may not dramatise the issue, but makes people feel a lot more powerful and motivated to act.
Framings of personal stories, especially stories of affected communities and how they manage to battle the consequences of climate change through innovation, resilience and creativity makes people feel closer to the issue and helps to convey a feeling for the impact of ones actions.
Social Media is partly establishing those framings. On the other hand it bears a lot of room for misinformation and can deepen doubt and mistrust among already unconvinced citizens.

Communicators, I consider myself one, have to carefully take the aim of their communication strategies into account and consciously use imagery and wordings to trigger the reaction we desire. There is no one way to communicate climate change, but any one-sided approach that fails to at least mention the complexity of the issue will most likely lead to mistrust and division. Media has the power to mobilise and connect people in a way no other tool can. Let us use this power wisely and focus on a human-centered, relateable, empathetic and solution based approach when talking about the climate crisis.

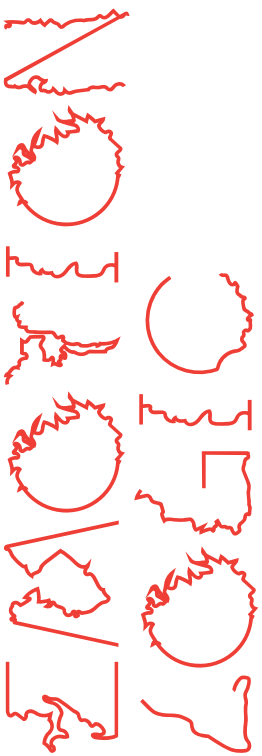
Emotions and Climate Communication

The Media is a powerful tool to communicate the climate crisis and has been doing so over the last decades. Reports have been informing the public about extreme weather events, making predections for the next 10, 20, 50 years, talking about 1,5 Degrees or 2 or 4? News on climate strikers, on restrictions and policies, to only name a few topics that I frequently come across.
But how do those messages make people feel? How do you feel reading this? How do I feel writing this? And how does this play a role when communicating the climate crisis.

Why humans need emotion

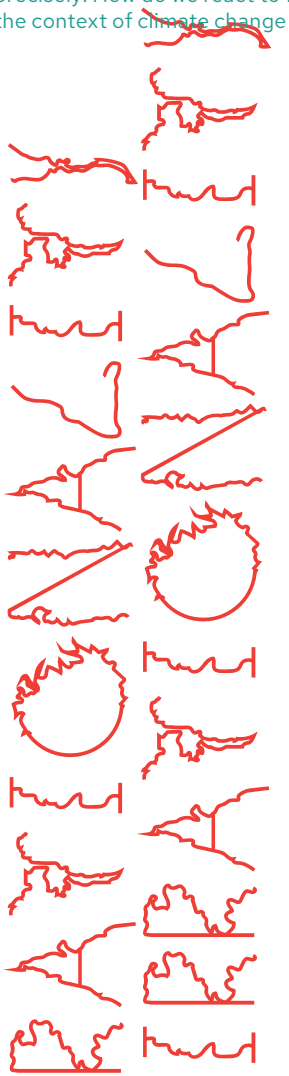
In western countries "emotions" are often perceived as a synonym for "irrationality" and are consciously left out of political or scientific debate, since they have the connotation to be "lacking logic". This is interesting in my opinion, since emotions are the reason why we human beings have even made it this far: From an evolutionary point of view emotions were "live-savers" enabling us to quickly interpret situations around us and react to potential danger [23]. Our cognitive responses would not be complete without emotions: even analytic reasoning would be incomplete without emotions and vice versa. Emotions on their own will lead to inappropriate responses but they are inarguably a part of us and of the way we process what we see, especially in regards to potential risks.

The reason why I had to focus on negative emotions and climate communication is because negative emotions play an important role in risk perception and motivate deeper and more careful information processing. Fear and anger for example are very strong negative emotions that therefore usually trigger a strong reaction. Especially for fear this holds true when the threat affects us personally, we see a very specific possibility to take precaucious action, and feel like we are in the position to complete those actions and believe that it will resolve the problem. We act upon fear as well when we feel like costs for action are low or acceptable, the consequence for not taking the action seems unappealing and having consciously and carefully processed threat information.



risks, like the climate crisis.

When looking at the climate crisis and everything we have talked about so far it is quite evident that the complexity and intersectionality of the issue does not really seem like there is a specific easy to complete and effective solution at hand right now (or ever). And since most of the people reading this were probably born in one of the industrial, rich countries of this world, we do not have to fear immediate threat caused by climate change (yet). So I will pose this question a little more precisely: How do we react to framings of fear and anger in the context of climate change communication?



Do emotions affect people's policy preferences?

Nicholas Smith and Anthony Leiserowitz in "The Role of Emotion in Global Warming Policy Support and Opposition" [24] for example studied how policy preferences were connected with emotion and whether specific emotions had a positive effect on accepting policy changes to effectively reduce global warming. Participants were asked to what extend they opposed or agreed with an array of different policies regarding climate change (e.g. tax reduction for energy efficient vehicles or regulation of carbon dioxide emissions). They were also asked which words or images came to mind when thinking about climate change, they were able to choose whether they would consider themselves rather egalitarian or individualistic and were able to rate the intensity of different emotions they felt when thinking about global warming. Among those emotions were fear, helplessness, interest, anger, sadness, hope, depression, guilt, disgust and worry.
The most supported policies among participants were related to renewable enegery sources. Regarding emotions on climate change it was found that over half of the participants felt interested in climate change, a lot felt disgusted and worried others felt hopeful, helpless, angry or sad a third felt afraid

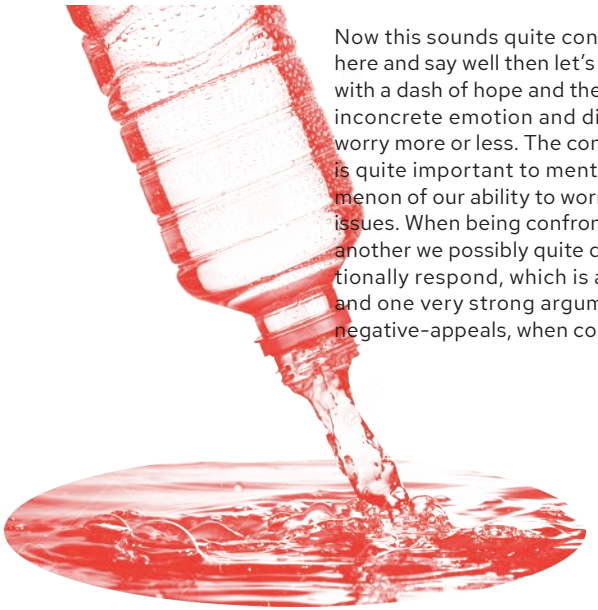
and a quarter depressed or guilty. To determine what kind of people would rather support or oppose policy changes their associacions, emotions, world views (individualistic vs. egalitarian) were compared with their tendency to support policy changes. Generally it was found that the more negative emotions participants felt when thinking about climate change the more likely they were to support corresponding policies. Those who related images associated with politics to climate change were likely to oppose climate change policies, while those who thought of ice melting and polar bears were likely to support those policies. Individualists were more likely to oppose climate change policies while egalitarians tended to support them.

What I found surprising when looking at emotions related to climate change, fear or anger were both not among the strongest positive predictors for policy support compared to worry, hope and interest. This is so interesting in my opinion, because climate change is currently mostly communicated through a rather negative "doom and gloom", dramatic, and sometimes exaggerated narrative, or in a very neutral science-based manner. It seems like stories tend to surpass the stage of worry, diving straight into fear, guilt and anger or avoid emotional communication altogether.

Fear could only be associated with positive response to policy changes when combined with worry. This correlates with assumptions made in the first part of the analysis, stating that fear appeals alone tend to distance people from the issue making them feel rather hopeless and powerless. Leiserowitz and Smith argue that worry, since it is not as intense as anger or fear, does not tend to "short-circuit" cognitive and analytical processing of risk information but promotes a rather constructive problem solving process. We know the feeling of worry mostly in regards to our carreers, money, loved ones or our health. With such issues we tend to gather more information to help us cope with the situation, instead of distancing ourselves from the problem, which may hold true to worry about climate change as well.

Emotion alone could be associated to 50% of policy support, which says a lot about the role of emotion when determining the willingness of people to change and when communicating climate change policies. Following the outcomes of this study climate change communication should focus on conveying worry-appeals, as well as focus on positive emotions such as hope and interest. Promoting pro-environmental behavior and giving people the impression that they are doing "the right thing", that they are doing "good" can be an example for hope /interest-appeal. So combining feelings like worry or even fear and anger with a constructive or positive frame could improve the likelyhood for people to accept and even actively demand policy changes to counteract the climate crisis.

(good for something after all the polar bear)



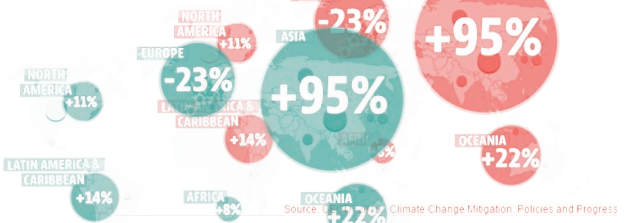
Now this sounds quite concrete already, and we could stop here and say well then let's just focus more on worry appeals with a dash of hope and then we will be ok. Worry is quite an inconcrete emotion and different types of people tend to worry more or less. The concept of the "Finite pool of worry" is quite important to mention here. It describes the phenomenon of our ability to worry only about a limited amount of issues. When being confronted with one negative story after another we possibly quite quickly burn out our ability to emotionally respond, which is also called "compassion fatigue" and one very strong argument against worry-, or generally negative-appeals, when communicating climate change.

Emotion and moral judgements

Here again it becomes quite clear that a lack of perceived self-efficacy, the feeling, that the behavioral change of the individual (or collective) may be insignificant when being confronted with such a multi-facetted issue like climate change, must be considered when communicating about it.

In a publication by Sabine Roeser [24] the impact and importance of emotion on moral judgements about risk is explored in a more philosophical way. Here, too, the gap between climate change knowledge and climate action is acknowledged as well as the role emotions play in risk perception.

Roeser argues that a carefully calibrated emotional approach towards climate change can help to convey a sense of urgency and promote individual action and support for policy change. This is important because emotions are a "necessary source of reflection and insight concerning the moral impact of climate change" and lead to a closer attachment and involvement with the issue. Distant, rational communication can make climate change feel less urgent while emotion might be the missing link to promote active participation of citizens.



Numbing by Numbers

Looking at risk perception and emotion, we can see that there are different fields of opinions among scientists. While some view emotions as hindrance to be excluded from decisionmaking about risk, others argue that we "need emotion to be practically rational". Paul Slovic, who studies human judgment, decision making, and risk perception mentions that emotion and reason are not necessarily two distinct things, but can interact with each other and should therefore be taken into consideration when communicating risk (aka the climate crisis). Acknowldging that decision-making requires complex consideration of morals, emotions can assist in gaining access to those moral values.

Neuroscientist Antonio Damasio underlines the link between emotion and rationality and states that not only emotional but also purely rational approaches can be misleading and in consequence be corrected by including emotion into the decision making process. An example for this, which I recognise from either my own arguing or from friends or family members: The belief that our own decisions do not impact the decision making of others. If I for example care about the environment and know that going on plane journeys to travel will cause significant damage to the environment, I may convince myself that I am still entitled to fly by taking a rationalistic stance thinking that my personal decision to not take the plane will not make other people do the same thing. The plane will still take off and pollute the environment, no matter whether I decide to board or not. This argument is perfectly rational and in this sense correct, but it undermines appropriate moral emotions. When deciding against taking the plane because I consider my care for the future of our planet as more important than the rational argument that not boarding does not change much in this moment, I may be making an irrational decision. Yet this irrationality will ultimately do a lot more for the envionment than the purely rational approach.
Emotion can help to reflect upon and criticise egoistic emotions as well, since the "rationality" of the approach might just as well be an excuse to fly to a place because we want to or because it is more comfortable.

And the question whether to change ones ways and take action on climate change or not is undoubtly a question of moral and ethics.

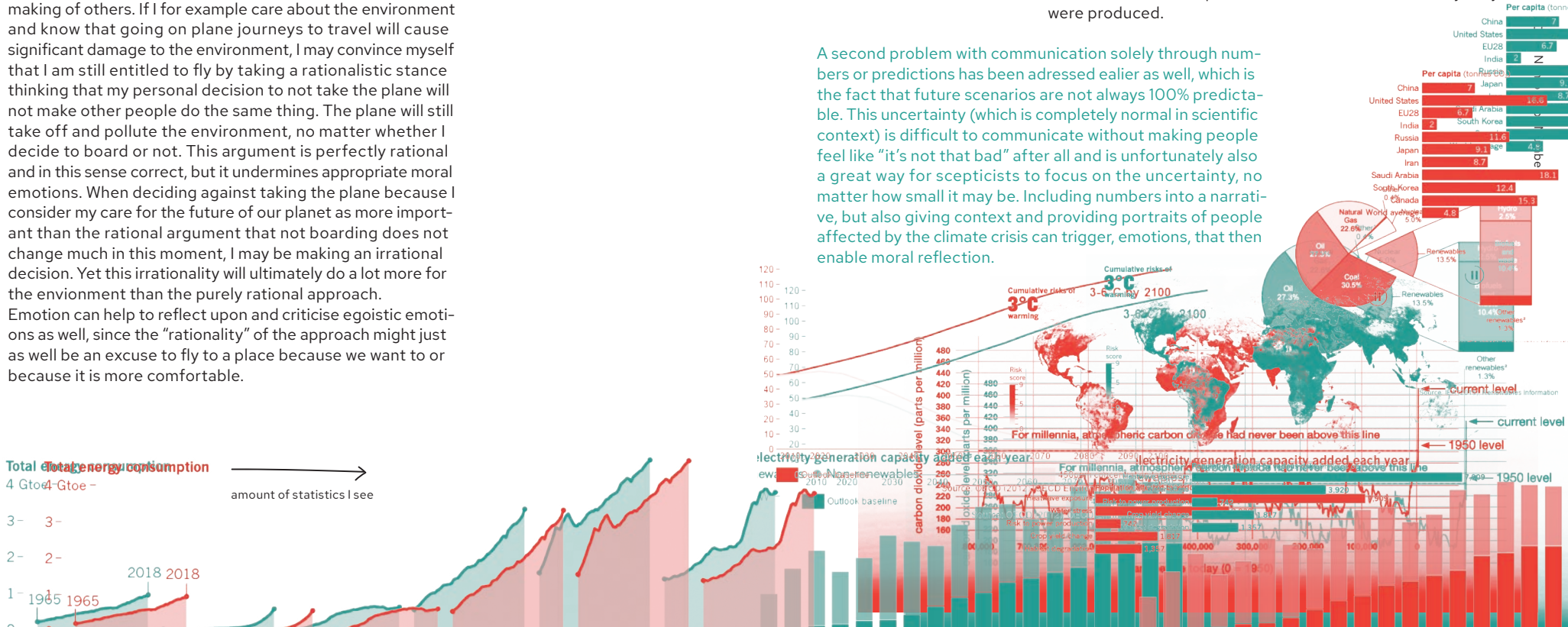
Another argument for including emotion into climate change communication would be the, as Slovic calls it, "Numbing by Numbers".

Oftentimes when I read about the climate crisis I am confronted with an array of numbers, amount and timespans: 1.5 degrees, 2 degrees, 4 degrees, about 750,000,000 tons of CO2 (Emissions of Germany in 2018 [27]),2030 or 2050.
Such numbers are very important to consider, but also very easy to detach from the issue, from the actions that have to be taken and the decisions that have to be made to fight climate change.

Likeliness that I do not understand and ignore them

Combining such factual evidence with feelings of justice and sympathy for victims, can help with involving and motivating people in a different way. This holds also true when making a connection between products we consume and the way they were produced.

A second problem with communication solely through numbers or predictions has been adressed ealier as well, which is the fact that future scenarios are not always 100% predictable. This uncertainty (which is completely normal in scientific context) is difficult to communicate without making people feel like "it's not that bad" after all and is unfortunately also a great way for scepticists to focus on the uncertainty, no matter how small it may be. Including numbers into a narrative, but also giving context and providing portraits of people affected by the climate crisis can trigger, emotions, that then enable moral reflection.



Interpersonal communication and the effect of emotions

The abstract by Brittany Bloodhart, Janet K. Swim and Elaine Dicicco from 2019 focusses especially on interpersonal commmunication, which is a very interesting, quite different side of communicating the climate crisis. The concept of the "5 Germanys" explained earlier suggest that neither of the groups sees communication with friends and family as a main source of information on climate change, but since humans are social beings and tend to depend a lot of what they do on how this may be perceived by others, it may be valuable to gain insights on how to best communicate the climate crisis in a personal conversation.

Bloodhart, Swim and Dicicco stress again what has been said before: messages of "doom and gloom" evoke strong negative emotions such as fear, anger and sadness, which tend to make people feel powerless and distance themselves from the issue. If not communicated to the right people with adequat framing in the correct moment and those narratives can lead to compassion fatigue.
Here even studies are mentioned which found that people generally claim to prefere neutral communication opposed to a fear inducing framing, relating to public communication through media . In the context of mainstream media emotions may appear irrational and "lacking logic". Does this differ when having a conversation with someone face-to-face on climate change?

or at the next familiy dinner... haha

I'M REALLY WORRIED ABOUT THE CLIMATE CRISIS... HONEY,... NOT AT THE DINNER TABLE, PLEASE

Preferences for emotional interpersonal communication

In three studies Brittany Bloodhart, Janet K. Swim and Elaine Dicicco looked at whether people preferred a message of climate change communicated conveying negative emotions or using no emotion at all, also in regards to their gender and political identity. One study tried to determine the reasons why people would prefer a message communicated with negative emotions compared to the "neutral" framing. It was explored how persuasive the two ways to frame climate change seemed to them and whether they perceived the different messages as caring, strong or rational. In another study a closer look was taken at the influence of gender and political identity, predicting "that emotional messages would be more effective at prompting action for women than for men" and "that Democrats would be more likely than Republicans to take action to address climate change in general, and that emotional messages would be more likely to prompt action among Democrats than Republicans".

Those studies found that participants generally preferred messages framed without emotion, but view emotional communication as more persuasive. Interestingly enough an impact on the likeliness to act on climate change was not found here in relation to negative framings of fear and anger. The fact that people perceive communicators using emotions in their messaging as more persuasive but still prefer "neutral" climate change communication could be explained by the fact that conveying feelings impacts more the way the communicator is viewed by the receiver of the message than the importance of the message itself.
Finally a significant influence of gender regarding the preference for using negative emotions to communicate climate change was not found. When looking at political identity on the other hand it became quite evident that Democrats were more likely to indicate that negative emotional messages matched their feelings about climate change, than Independents or Republicans.

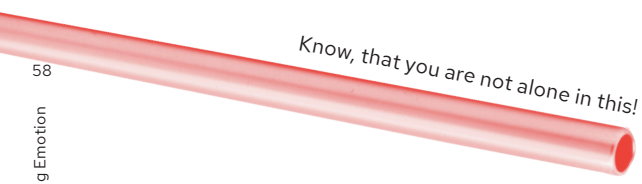
This may be a crucial point, since the messengers and how persuasive they seem, is usually as important as the message itself. Communicating in a factual and calm way, but still including emotions and feelings into the narrative might be an effective combination when addressing the climate crisis in personal conversations.

Suppressing Emotion

An, in my opinion, important point, when discussing whether or not to include emotion in climate change communication is that surpression of emotion comes at a personal cost and leads to stress and an intensification of those feelings.

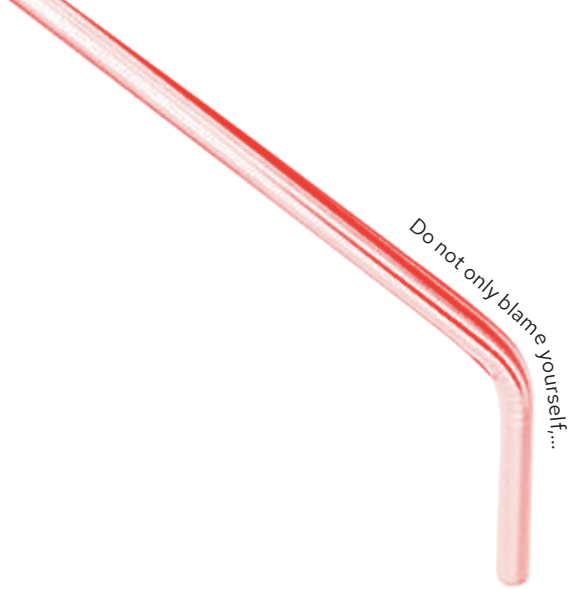
We may not do ourselves a favor when simply saying: No more negative emotions around climate change! Only love and peace allowed! This could be counterproductive for the communicator and also incredibly far away from the reality of climate anxiety.

Moser [23] also stresses this in her abstract, that we as communicators must be aware of our feelings and emotions towards the climate crisis, to be able to convey them effectively and authentically without seeming completely irrational and illogical. Coming to terms with one's own feelings about climate change may also lead to engaging one's audience in a deeper way since they are "spoken to as whole people".

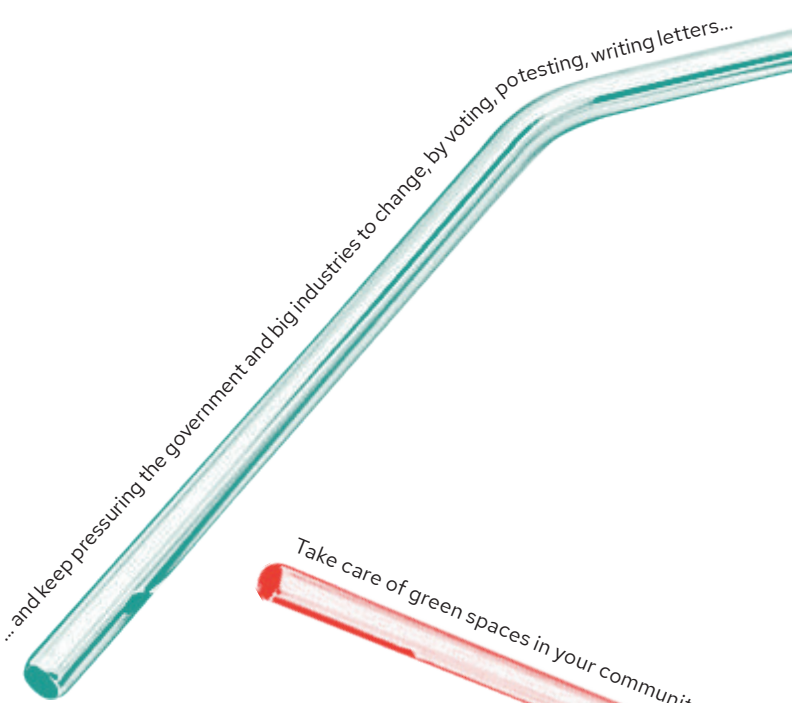


"Dealing and addressing ones own emotions" is easier said than done, especially while the outcome of all of this is currently very uncertain. So I collected a few (plastic free, aluminium) straws from different websites with tips to combat eco-anxiety for to hold on to:

Sources [accessed December 2020]
https://blog.ecosia.org/climate-anxiety-psychology-podcast/
https://www.newscientist.com/article/2220561-stressed-about-climate-change-eight-tips-for-managing-eco-anxiety/



Even though I personally really do not get why irrationality has such a negative connotation



"I'm not going to say go hug a tree because that would be a crude version [of this], but by protecting the environment, grieving what we've done to the planet and recognising our interdependence, we will save ourselves."

Hickman

Conclusion

If I take away one aspect from this whole research, it would probably be that there is no one size fits all approach. The one solution, the magic trick or a bullet proof strategy does not exist. The climate crisis is a wicked problem, ever changing, expanding and evolving, difficult to grasp and difficult to communicate. But the one thing that I know for sure is that I will never ever stop talking about it.

And while I keep talking about it, I might as well implement some of those tips that I found in George Marshall's book [7] and in Sander van der Linden's, Edward Maibach's and Anthony Leiserowitz's paper "Improving Public Engagement With Climate Change: Five "Best Practice" Insights From Psychological Science" [28].

The first tips evolve around creating proximity.
It is important to move away from future scenarios, from what might happen and start focussing on what is happening right now. Moments of political decision making and collective action (a conference, a climate strike, etc.) are great for creating such proximity. The climate crisis is happening right now, now is the time to focus on it. At the same time conversations need to be opened up about this very immediate threat. Talking about how we, as humans affected by the crisis can prepare ourselves and how we can move together in the same direction.
Maybe looking at communities that are facing the consequences of climate change and ultimately the consequences of our "western way" of life, may help to see how humans can effectively take action against climate change. Not viewing them as victims, but as inventive resilient people who are finding creative solutions to this issue. Those are real stories to understand the urgency of the crisis. Not everything can be reduced down to facts and numbers. Humans relate to experiences, to compelling stories with actors, motives, causes and effects.

Here the climate crisis is oftentimes reduced down to an ecological issue through iconographic narratives, missing out on the whole story. As complex and difficult of a task that it may seem, as a communicator it is crucial to focus on all aspects when talking about the climate crisis: the social aspects, the industry, politics, etc. This may also mean questioning our current economic system and whether it is compatible with a just and sustainable way of coexisting as a human.

I finally find it very important to stress the need for collectiveness and for communication that focuses on cooperation and moving together into the same direction. This however does not mean that everyone has to move in the same way. People do not become the same, there is no need for everyone to live in a tree to protect it from being or to block fossile fuel infrastructure. There are different ways for each and everyone of us to be involved in this.
Informing about climate change, talking about risks and telling compelling relateable stories, it is important to include solutions as well. Fear or anger inducing narratives that lack constructive solutions and a pinch of hope may lead to compassion fatigue and lower perceived self efficacy. Policy changes for example do not have to be framed as losses, we can gain a lot from collective action and power, if the fight against the climate crisis is not framed as a fight of restriction but as an opportunity to create change that may benefits many more people.

and we need to be.

Remember the polar bear? Yeah, that is the exact opposite of that. Again, I do not hate the polar bear, but we as humans closely and emotionally (!) relate to narratives that feel close to us.

I personally find it very hard to hear this, but I am still going to mention this aspect again: We, us people living here in industiral countries, have power. We are lucky enough to be born on a piece of land where we are able to participate in our political system. And not only are we able, we are obliged to do so. Not taking this chance that we can influence policy making by freely voicing our opinions would be irresponsible, immoral, simply wrong and disrespectful towards people in countries who do not have the chance to change much, while being hit by the consequences of climate change much harder than we are.

Going back to the polar bear again (I am sorry, I swear it is the last time) another aspect this framing misses is, that it does not tell the full story.

We Are Good

One final aspect I would like to stress here, is something that admittetly, feels hard to believe sometimes, but is still something that I would really like to be true. We humans are social beings. We like to do "the right thing" we like to do "good" and to use our skills and our knowledge for a "higher purpose". Humans are not solely motivated by monetary gains (Stern, Dietz, Abel, Guagnano, & Kalof, 1999), since those are short-lived and do not fulfill us in the long run. Something that does motivate to certain behavioral changes is intrinsical motivation; the intrinsic care for the well-being of others, of our community, of us as a collective.
This information alone motivates me to try and move away from enemy narratives and towards a collective approach

One last aspect that should not be forgotten is that we are all biased, we are all emotional and we are all human. No one has it all figured out, there are many many sites to this medal and it might be worth listening to each others arguments,as long as they are presented in a constructive, respectful way. To try and understand where the other person is coming from may be one of the most valuable aspects when it comes to communicating the climate crisis. It is easy to finger point and get mad at inaction or opinions of others, but this does not cool down our athmosphere. If we want change, we need all of us.

Disclaimer: This is VERY easily said, check on me again the next time I read about lobbyist in the automotive sector or how we cannot act immediately on climate change because of tHe EcOnOmY.

Even though of course I believe that my opinions are the right ones, I think we all kind of do.

I believe that each and every one of us can and each and every one of us has to play a part in this conversation about the climate crisis. This is why I am dedicating the second, practical part of this thesis to collecting stories on personal impacts on our environment.
What is the role that each and every one of us plays in this? And can sharing our personal impacts with each other start a more constructive, relateable, collective discussion on the climate crisis?

If you would like to be a part of this small project or simply learn about other people's perspectives you can find more information here:

whatisyourimpact.xyz

References

[0] Julia Metag, Mike S. Schäfer, Tobias Füchslin, July 2015 Global warming's five Germanys: A typology of Germans' views on climate change and patterns of media use and information
[1] Schmidt, A., Ivanova, A., Schäfer, M.S., 2014. Media attention for climate change around the world. A comparative analysis of newspaper coverage in 27 countries. Global Environmental Change 23 (5), 1233–1248.
[2] Hamburge Klimabericht 2018, Kapitel 12.1
[3] Brüggemann M, Engesser S (2015) Skeptiker müssen draußen bleiben: Weblogs und Klimajournalismus. In: Hahn O, Hohlfeld R, Knieper T (Hrsg) Digitale Öffentlichkeit(en). UVK, Konstanz, S 165–182
[4] Boykoff MT, Boykoff JM (2004) Balance as bias: global warming and the US prestige press. Global Environ Chang 14(2):125–13
[5] Billett, S., 2010. Dividing climate change. global warming in the Indian mass media. Climatic Change 99 (1), 1–16.
[6] Painter J, Ashe T (2012) Cross-national comparison of the presence of climate scepticism in the print media in six countries, 2007–10.
[7] George Marshall, 2014, Why our brains are wired to ignore climate change (chapter 18)
[8] Hamburge Klimabericht 2018, Kapitel 12.2
[9] Axel Bojanowski , APUZ Klimadiskurse 18.11.2019 "Jounalisten im Klimakrieg"
[10] Saffron J. O'Neill and Max Boykoff , 28.09.2010 Climate denier, skeptic, or contrarian?
[11] Herbert Blumer, Winter 1971 Social Problems as Collective Behavior chapter in: Social Problems, Volume 18, Issue 3, Pages 298–306,
[12] David Wallace-Wells 10th July 2017, "The uninhabitable Earth", NYT Magazine, https://nymag.com/intelligencer/2017/07/climate-change-earth-too-hot-for-humans-annotated.html (accessed Nov/2020)
[13] Jon Christensen, 9th August 2017, Climate gloom and doom? Bring it on. But we need stories about taking action, too, https://theconversation.com/climate-gloom-and-doom-bring-it-on-but-we-need-stories-about-taking-action-too-79464 (accessed Nov/2020)
[14] Anthony Leiserowitz, Article: Does doom and gloom convince anyone about climate change? by Erika Engelhaupt, JULY 28, 2017
[15] Michael Mann, 15 July 2017, "Scientists explain what New York Magazine article on "The Uninhabitable Earth" gets wrong" https://climatefeedback.org/evaluation/scientists-explain-what-new-york-magazine-article-on-the-uninhabitable-earth-gets-wrong-david-wallace-wells/ (accessed Nov/2020)
[16] Shorestein Center, May 29, 2018 Doom and Gloom: The Role of the Media in Public Disengagement on Climate Change, by Elizabeth Arnold, Joan Shorenstein Fellow, Spring 2018, and Associate Professor of Journalism, University of Alaska
[17] Susie Wang, Adam Corner, Daniel Chapman, Ezra Markowitz, November 2017 Public engagement with climate imagery in a changing digital landscape
[18] Saffron J. O'Neill , Maxwell Boykoff, Simon Niemeyer, Sophie A. Day, 14th November 2012 On the use of imagery for climate change engagement
[19] Betsy Lehman, Jessica Thompson, Shawn Davis and Joshua M. Carlson, 15 May 2019 Affective Images of Climate Change

[20] Aleksandrina V. Mavrodieva, Okky K. Rachman, Vito B. Harahap and Rajib Shaw, October 2019 Role of Social Media as a Soft Power Tool in Raising Public Awareness and Engagement in Addressing Climate Change
[21] Lara S. G. Piccolo , Diana Maynard, Christoph Meili, May 2016 Talking climate change via social media: communication, engagement and behaviour
[22] Shelley Boulianne , Mireille Lalancette and David Ilkiw, May 2020 by "School Strike 4 Climate": Social Media and the International Youth Protest on Climate Change"

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